

PROXY
STATEMENT
for
2020 ANNUAL
MEETING OF
SHAREHOLDERS

Notice of 2020 Annual Meeting and Proxy Statement

ITEMS OF BUSINESS

- To elect six directors, nominated by the Board of Directors, as more fully described in the Proxy Statement
- 2. To consider and ratify the selection of Ernst & Young LLP as independent registered public accountants for the fiscal year ending December 31, 2020
- To consider and act upon an advisory vote to approve the compensation of our named executive officers
- 4. To consider and act upon any other business which may properly come before the meeting

Time and Date

8:00 a.m., Eastern Daylight Time (EDT) on Wednesday, May 13, 2020

Location

Our 2020 Annual Meeting will be held online (only) at www.virtualshareholdermeeting.com/RGEN2020

Record Date

You can vote your shares if you were a shareholder of record at the close of business on April 1, 2020 (the "Record Date").

It is important that your shares be represented and voted at the 2020 Annual Meeting of Shareholders (the "Annual Meeting"). Whether or not you plan to attend the Annual Meeting online, please complete and return the enclosed proxy card in the envelope provided or vote by internet or telephone pursuant to instructions provided with the proxy card.

HOW TO VOTE

Voting instructions are the same for registered shareholders (shares are registered in your name with Repligen's transfer agent, American Stock Transfer) and beneficial owners (shares are held in a stock brokerage account or by a bank or other holder of record). Here's how to vote prior to the Annual Meeting:





You may also vote at the Annual Meeting via www.virtualshareholdermeeting.com/RGEN2020. You will need the 16-digit control number included with these proxy materials to vote electronically, to vote by phone, and/or to attend the Annual Meeting online. A technical support telephone number will be posted on the Annual Meeting log-in page at www.virtualshareholdermeeting.com/RGEN2020 that you can call if you encounter any difficulties accessing the Annual Meeting during the check-in or during the meeting.

Execution of a proxy card, or voting by telephone or via the Internet prior to the Annual Meeting, will not in any way limit a shareholder's right to attend the Annual Meeting and vote during the meeting.

By Order of the Board of Directors



Jon K. Snodgres Chief Financial Officer and Corporate Secretary April 29, 2020

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Proxy Statement Summary

This summary highlights information contained elsewhere in the Proxy Statement. This summary does not contain all of the information that you should consider in connection with the Annual Meeting, and you should read the entire Proxy Statement carefully before voting.

SUMMARY OF VOTING MATTERS

Proposal	Description	Board Recommendation
Proposal 1: Election of directors (page 10)	We are asking our shareholders to elect each of the six (6) directors identified below to serve until the 2021 Annual Meeting of Shareholders.	FOR each nominee
Proposal 2: Ratification of the selection of the independent registered public accounting firm (page 22)	We are asking our shareholders to ratify our Audit Committee's selection of Ernst & Young LLP ("E&Y") to act as the independent registered public accounting firm for Repligen in 2020. Although our shareholders are not required to approve the selection of E&Y, our Board believes we should provide an opportunity to our shareholders to ratify this selection.	FOR
Proposal 3: Advisory vote on executive compensation (page 25)	We are asking our shareholders to cast a non-binding, advisory vote to approve the compensation of our named executive officers. In evaluating this year's "say on pay" proposal, we recommend that you review our Compensation Discussion and Analysis, describing how the Compensation Committee arrived at its executive compensation actions and decisions for 2019.	FOR

Please see the sections titled "General Annual Meeting Information" and "Additional Information" for important information about the proxy materials, including voting methods, vote requirements for adoption of each proposal, effect of abstentions and the deadlines to submit shareholder proposals and director nominations for next year's annual meeting of shareholders.

OUR DIRECTOR NOMINEES

You are being asked to vote on the election of the following six (6) nominees to our Board of Directors. All directors are elected annually by the affirmative vote of a majority of votes cast. The chart below summarizes our director nominees' personal information and current committee memberships. You can find detailed information about each current director and director nominee's background, skill sets and areas of expertise later in this Proxy Statement.⁽¹⁾

				Other Public Independent Boards	Currer	Current Committee Memberships (2)		
Name and principal occupation	Director Age (1) Since	Independent	Audit		Compensation	Nominating & Corporate Governance		
Tony J. Hunt President, Chief Executive Officer, Repligen Corporation	56	2015		-				
Karen A. Dawes, Chairperson President, Knowledgeable Decisions, LLC (3)	68	2005	✓	2	• (3)		CHAIR	
Nicolas M. Barthelemy Former President and CEO, bioTheranostics	54	2014	√	2		CHAIR	•	
Rohin Mhatre Senior Vice President of Pharmaceutical Development, Engineering and Technology at Biogen Inc.	55	2020	✓	-		•		
Glenn P. Muir Retired Chief Financial Officer and Executive Vice President, Hologic, Inc.	61	2015	✓	2	CHAIR	•		
Thomas F. Ryan, Jr. Retired President and Chief Operating Officer, American Stock Exchange	78	2003	√	-	•		•	

- (1) Age as of the date of the 2020 Annual Meeting.
- (2) John G. Cox and Glenn L. Cooper currently serve as members of our Board of Directors, and Mr. Cox serves as a member of the Audit Committee. Neither Mr. Cox nor Dr. Cooper will stand for re-election at the expiration of his current term at the close of the 2020 Annual Meeting.
- (3) Karen A. Dawes has been appointed to the Audit Committee effective as of the close of the 2020 Annual Meeting.

BOARD COMPOSITION

We continually evaluate our director skillsets and expertise for alignment with Repligen's strategic goals. Our independent directors bring extensive experience in areas that are critical to the Company's strategy and long-term success, such as biopharmaceutical manufacturing, global and commercial operations, and finance. Below we highlight the key skills and experiences of our director nominees that are critical to Repligen's success.

	Key Skills & Experience						
Director Nominee	Public Company Board/Leader	Risk Oversight	Finance and Capital Markets	Manufacturing & Global Operations	Strategic Planning and M&A	Bioprocessing	Commercial
Tony J. Hunt	✓	✓	✓	✓	✓	✓	✓
Karen A. Dawes	✓	✓			✓		✓
Nicolas M. Barthelemy	✓	✓		✓	✓	✓	✓
Rohin Mhatre		✓		✓		✓	
Glenn P. Muir	✓	✓	✓		✓		
Thomas F. Ryan, Jr.	✓	✓	✓		✓		

CORPORATE GOVERNANCE HIGHLIGHTS

Repligen is committed to implementing and maintaining effective corporate governance practices that further long-term shareholder value, promote Board of Directors accountability, and align the interests of our executive team with those of our shareholders. The following represent the key elements of our corporate governance programs:

Director Independence

- Five (5) of six (6) director nominees are independent
- One-third of our director nominees represent gender and ethnic diversity
- Our President and CEO is the only non-independent director
- All Committee members are independent
- Executive sessions of independent directors are held at each Board meeting

Board Governance Practices

- Annual Board and Committee evaluations and self-assessments
- All directors and officers are subject to a Code of Business Conduct and Ethics
- All directors attended 75% or more of Board and committee meetings
- Chair and CEO are separate and current Chair is female

Shareholder Rights

- Annual election of all directors
- Majority voting standard in uncontested director elections
- Shareholder right to amend By-laws
- No supermajority voting requirements in By-laws or Charter
- Robust investor outreach program representing over 60% of shares outstanding

Board and Committee Oversight Rights

- Risk assessment and enterprise risk management assessment
- Corporate strategy oversight
- Oversight of environmental, social and governance initiatives and risks

Compensation Practices/Policies

- Director stock ownership guidelines
- Executive compensation program links pay with corporate and individual performance
 Significant percentage of target compensation is "at-risk" through short-term and long-term incentive awards
- Anti-hedging, anti-pledging and anti-short-sale policies
- Compensation clawback policy

Shareholder Engagement

Our Board and management team value the views and insights of our shareholders. We engage with our shareholders through a robust schedule of investor meetings, conferences, roadshows and other events. Throughout 2019, in addition to our traditional Investor Relations outreach efforts through which we directly engaged with shareholders representing over 60% of our outstanding shares, we also engaged with proxy governance teams at institutions representing over 30% of outstanding shares. These discussions covered a range of topics including our business and financial performance and strategies, corporate governance and executive compensation programs, and environmental and social matters.

Each of the proxy governance conversations included at least one member of our Board as appropriate. Our shareholder engagement activities have influenced Board meeting agendas and have led to governance enhancements that help us address the issues that matter most to our shareholders. We consider this ongoing engagement process important in creating long-term value, in maintaining a culture of integrity, compliance and sustainability, and informing our environmental, social and governance ("ESG") activities.

EXECUTIVE COMPENSATION HIGHLIGHTS

Repligen's compensation philosophy is to provide compensation that will attract and maintain high-performing talent in our industry, motivate the Company's executive officers to create long-term value and enhance shareholder value, provide a fair reward for their effort and stimulate our executive officers' professional and personal growth. The Company believes that the compensation of its executive officers should align the executive officers' interests with those of the shareholders and focus executive officer behavior not only on the achievement of near-term corporate goals, but also on the achievement of long-term business objectives and strategies.

To accomplish these objectives, the Company's compensation program for its executive officers provides for:

- annual cash incentive compensation that motivates the executive officers to manage the business to meet the Company's short- and long-term objectives;
- equity incentive compensation, including performance-based equity awards, to ensure that its executive officers are
 motivated over the long-term to respond to the Company's business challenges and opportunities as owners and not
 just as employees, thereby aligning the executive officers' interests with those of shareholders; and
- compensation that is competitive with other bioprocessing, healthcare supply and biotechnology companies
 with which the Company competes for talent, determined by comparing the Company's pay practices with these
 companies.

The mix of cash incentives and time-based and performance-based incentive awards to the Company's executives is designed to balance the Company's near- and long-term incentives, provide additional motivation for our executives to drive organizational achievement of both near- and long-term corporate goals and further align the interests of the Company's executive officers with those of the shareholders.

Compensation Practices

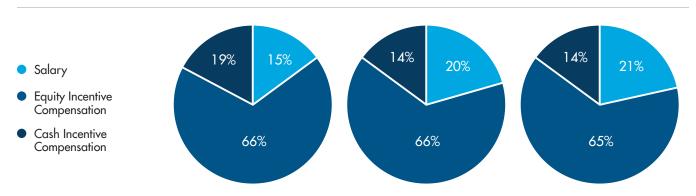
The following features of our compensation program are designed to align the interests of our executive team with those of our shareholders and with market best practice:

	We Do		We Don't
✓	We emphasize performance-based compensation that aligns the interests of our shareholders and executive officers through the use of both short-term cash incentive compensation and equity awards subject to both time and performance-based vesting.		Ve do not allow hedging or pledging of our ecurities without pre-approval.
✓	We maintain an industry-specific peer group for benchmarking pay.		We do not allow for re-pricing of stock options vithout shareholder approval.
✓	We target pay based on market norms.	× V	Ve do not provide excessive perquisites.
✓	We offer market-competitive benefits for executives that are consistent with the benefits we offer all of our employees.		Ve do not provide supplemental executive etirement plans.
✓	We consistently engage an independent compensation consultant to advise on compensation levels and practices.	× V	Ve do not provide tax gross-up payments.
✓	We maintain stock ownership guidelines that require our directors, including the Chief Executive Officer, to maintain a specified level of ownership.		We do not provide guaranteed bonuses to our executive officers.
✓	We have a clawback policy covering cash and equity incentive compensation paid to our Chief Executive Officer and other executive officers.		

Compensation Earned

The graph below reflects the allocation of salary, equity incentive compensation, cash incentive compensation, and other compensation earned by the Company's principal executive officer, principal financial officer, and senior vice president of research & development, all three of whom were serving as the Company's named executive officers ("NEOs") as of December 31, 2019. Additional NEO compensation detail and notes can be found in the 2019 Summary Compensation Table later in this Proxy Statement.

2019 Summary Compensation Allocations



Named Executive Officer	Tony J. Hunt	Jon K. Snodgres	Ralf Kuriyel
Title	President and CEO	Chief Financial Officer	Senior VP of R&D
Total 2019 Compensation	\$4,424,560	\$1,876,607	\$1,606,666

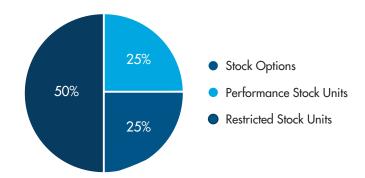
Long-term Equity Incentive Breakout for Named Executive Officers

We believe that the mix of time-based and performance-based equity awards under long-term incentive compensation program adds balance to our long-term incentives, provides motivation for our executives to drive organizational achievement of our near- and long-term corporate goals and aligns the interests of our executive officers with those of the shareholders.

As shown in the graph below, the long-term equity incentive compensation awards made to our NEOs in 2019 and 2020 are split, based upon dollar value, between performance-based restricted stock units (25%), stock options subject to time-based vesting (25%) and restricted stock units subject to time-based vesting (50%). We granted our named executive

officers performance-based equity awards in 2019 and 2020 and we anticipate that we will continue to include such awards as part of our long-term incentive compensation program going forward for the reasons noted above.

All awards are subject to 3-year vesting schedules. Performance-based stock unit awards vest only if we achieve 3-year return on invested capital and average revenue growth goals.



BUSINESS HIGHLIGHTS 2019

Below are business highlights for 2019, which are discussed further in the Year in Review section later in this Proxy Statement.

We surpassed our business and financial goals for 2019, staying true to our course of creating and leading new markets through technology innovation. We focused on differentiated products suited to the complexities and pressures of modern biopharmaceutical manufacturing, with single-use and flexible solutions that are "inspiring advances in bioprocessing."

In 2019, Repligen:

- Increased revenue to \$270.2 million, a gain of 39% year-over-year, including organic growth of 33%.
- Continued to invest in future growth, with approximately 7% of revenue dedicated to new product development; capital expenditures of \$23.2 million to support IT systems investments and expansion of our facilities to increase manufacturing capacity; and \$239.9 million spent to fund our acquisition of process analytics innovator C Technologies.
- Raised approximately \$500 million (net) through a series of equity and convertible debt financings, to support
 potential acquisitions and internal investments.
- Continued to build our organization, deploying a new systems team to support our Filtration business and expanding our commercial team to a total of 140 individuals focused on supporting and building our customer base.
- Leveraged opportunities for our single-use products and contained systems to serve cell and gene therapy, a relatively new and fast-growing class of biologics that represented approximately 15% of our revenue in 2019.
- Introduced KrosFlo® TFDF™, a novel technology for harvest clarification that unites the benefits of tangential flow and depth filtration into one integrated solution.
- Generated free cash flow of \$44.1 million, an increase of 135% compared to 2018, and reported cash and cash equivalents of \$528.4 million as of December 31, 2019.

We grew our business on a year-over-year basis across many metrics, including those exhibited below.



SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS, DIRECTORS AND MANAGEMENT

The following table sets forth certain information regarding beneficial ownership of shares of Repligen's Common Stock as of April 1, 2020 (i) by each person who is known by the Company to beneficially own more than 5% of the outstanding shares of Common Stock; (ii) by each director or nominee of the Company; (iii) by each named executive officer of the Company and (iv) by all directors and executive officers of Repligen as a group. The business address of each director and executive officer is Repligen Corporation, 41 Seyon Street, Building #1, Suite 100, Waltham, Massachusetts 02453.

Beneficial Owner	Amount and Nature of Beneficial Ownerships (1)		Percent of Class (2)
BlackRock, Inc (3)	5,778,909		11.1%
The Vanguard Group (4)	4,469,147		8.5%
Roy T. Eddleman ⁽⁵⁾	3,565,864		6.8%
Tony J. Hunt (6)	354,677	*	
Jon K. Snodgres ⁽⁷⁾	48,478	*	
Ralf Kuriyel (8)	25,789	*	
Karen A. Dawes (9)	170,176	*	
Nicolas M. Barthelemy (10)	10,522	*	
Glenn L. Cooper (11)	111,610	*	
John G. Cox ⁽¹²⁾	3,032	*	
Glenn P. Muir (13)	40,591	*	
Thomas F. Ryan, Jr (14)	6,966	*	
Rohin Mhatre, Ph.D. (15)	_	*	_
All directors, nominees and executive officers as a group (10 Persons)	771,841		1.5%

^{*}Less than one percent

- (1) Beneficial ownership, as such term is used herein, is determined in accordance with Rule 13d-3 promulgated under the Securities Exchange Act of 1934 (as amended, the "Exchange Act"), and includes voting and/or investment power with respect to shares of Common Stock of Repligen. Unless otherwise indicated, the named person possesses sole voting and investment power with respect to the shares. The shares shown include shares that such person has the right to acquire within 60 days of April 1, 2020.
- (2) Percentages of ownership are based upon 52,278,083 shares of Common Stock issued and outstanding as of April 1, 2020. Shares of Common Stock that may be acquired pursuant to options that are exercisable or restricted stock units that will vest within 60 days of April 1, 2020 are deemed outstanding for computing the percentage ownership of the person holding such options but are not deemed outstanding for the percentage ownership of any other person.
- (3) Based solely on a Schedule 13G/A filed on February 10, 2020 for the December 31, 2019 filing event. BlackRock, Inc.'s business address is 55 East 52nd Street, New York, NY 10055. BlackRock, Inc. has sole voting power with respect to 5,676,820 shares and sole dispositive power with respect to 5,778,909 shares.
- (4) Based solely on a Schedule 13G/A filed on February 12, 2020 for the December 31, 2019 filing event. The Vanguard Group's business address is 100 Vanguard Blvd., Malvern, PA 19355. The Vanguard Group has sole voting power with respect to 108,162 shares and sole dispositive power with respect to 4,360,117 shares.
- (5) Based solely on a Schedule 13G/A filed on January 31, 2020 for the December 31, 2019 filing event. Mr. Eddleman's business address is c/o TroyGould PC, 1801 Century Park East, 16th Floor, Los Angeles, CA 90067. Mr. Eddleman has sole voting power and sole dispositive power with respect to 3,565,864 shares.
- (6) Includes 285,752 shares issuable pursuant to stock options which are exercisable within 60 days of April 1, 2020.

- (7) Includes 30,945 shares issuable pursuant to stock options which are exercisable within 60 days of April 1, 2020 and 1,600 restricted stock units which will vest within 60 days of April 1, 2020.
- (8) Includes 15,919 shares issuable pursuant to stock options which are exercisable within 60 days of April 1, 2020 and 1,600 restricted stock units which will vest within 60 days of April 1, 2020.
- (9) Includes 61,142 shares issuable pursuant to stock options which are exercisable within 60 days of April 1, 2020 and 5,292 restricted stock units which will vest within 60 days of April 1, 2020.
- (10) Includes 5,413 shares issuable pursuant to stock options which are exercisable within 60 days of April 1, 2020 and 923 restricted stock units which will vest within 60 days of April 1, 2020.
- (11) Includes 51,901 shares issuable pursuant to stock options which are exercisable within 60 days of April 1, 2020 and 923 restricted stock units which will vest within 60 days of April 1, 2020.
- (12) Includes 2,109 shares issuable pursuant to stock options which are exercisable within 60 days of April 1, 2020 and 923 restricted stock units which will vest within 60 days of April 1, 2020.
- (13) Includes 35,213 shares issuable pursuant to stock options which are exercisable within 60 days of April 1, 2020 and 923 restricted stock units which will vest within 60 days of April 1, 2020.
- (14) Includes 5,043 shares issuable pursuant to stock options which are exercisable within 60 days of April 1, 2020 and 923 restricted stock units which will vest within 60 days of April 1, 2020.
- (15) Dr. Mhatre was elected to the Board as of March 1, 2020.
- (16) See footnotes 6 through 15 above. Includes 493,437 shares issuable pursuant to stock options which are exercisable within 60 days of April 1, 2020 and 13,107 restricted stock units which will vest within 60 days of April 1, 2020.

PROPOSAL 1 ELECTION OF DIRECTORS DIRECTOR NOMINEES

There are six nominees for director, all of whom are current directors of Repligen that have been nominated by the Nominating and Corporate Governance Committee and the Board for re-election. With the appointment of Dr. Mhatre in March 2020, the authorized number of directors constituting the Board increased from seven to eight. Neither John G. Cox nor Glenn L. Cooper will stand for re-election at the expiration of their current term as of the close of the Annual Meeting.

If elected, each of the director nominees will hold office until the 2021 Annual Meeting of Shareholders and until his or her successor has been duly elected and qualified, or until his or her earlier death, resignation or removal.

Nominee's Name	Year First Elected Director	Position(s) with the Company
Tony J. Hunt	2015	President, Chief Executive Officer and Director
Karen A. Dawes	2005	Director, Chairperson of the Board
Nicolas M. Barthelemy	2014	Director
Rohin Mhatre, Ph.D.	2020	Director
Glenn P. Muir	2015	Director
Thomas F. Ryan, Jr	2003	Director

Shares represented by all proxies received by the Board and not marked or voted so as to abstain from voting for any individual director or for any group of directors will be voted, unless otherwise indicated, FOR the election of the nominees named above. Proxies may not be voted for a greater number of persons than the number of nominees named. The Board knows of no reason why any nominee should be unable or unwilling to serve, but if any nominee should be unable or unwilling to serve, proxies will be voted in accordance with the judgment of the persons named as attorneys-in-fact on the proxy cards with respect to the directorship for which that nominee was unable or unwilling to serve.

Proposal 1 relates solely to the election of the six above-named directors nominated by the Company and does not include any other matters relating to the election of directors, including without limitation, the election of directors nominated by any shareholders of the Company.

The Board of Directors unanimously recommends a vote FOR each of the nominees for election as directors of the Company. If authorized proxies are submitted without specifying an affirmative or negative vote on any proposal, the shares represented by such proxies will be voted in favor of the Board of Directors' recommendations.

OCCUPATIONS OF DIRECTORS AND EXECUTIVE OFFICERS

Repligen's executive officers are appointed by, and serve at the discretion of, the Board of Directors. Each executive officer is a full-time employee of Repligen. The current directors, including director nominees, and executive officers of Repligen as of April 1, 2020, are as follows:

Name	Age (1)	Position(s)
Tony J. Hunt	56	President, Chief Executive Officer and Director
Jon K. Snodgres	54	Chief Financial Officer
Ralf Kuriyel	61	Senior Vice President, Research and Development
Nicolas M. Barthelemy (2)(5)	54	Director
Glenn L. Cooper (3)	67	Director
John G. Cox ⁽³⁾	57	Director
Karen A. Dawes (5)(6)	68	Director, Chairperson of the Board
Rohin Mhatre, Ph.D. ⁽²⁾	55	Director
Glenn P. Muir (2)(4)	61	Director
Thomas F. Ryan, Jr. (4)(5)	78	Director

- (1) Age as of the date of the Annual Meeting.
- (2) Member of the Compensation Committee.
- (3) John G. Cox and Glenn L. Cooper currently serve as members of our Board of Directors, and Mr. Cox serves as a member of the Audit Committee. Neither Mr. Cox nor Dr. Cooper will stand for re-election at the expiration of his current term as of the close of the Annual Meeting.
- (4) Member of the Audit Committee.
- (5) Member of the Nominating and Corporate Governance Committee.
- (6) Karen A. Dawes has been appointed to the Audit Committee effective as of the close of the Annual Meeting.

BIOGRAPHICAL INFORMATION

The following paragraphs provide information about the Company's continuing directors and executive officers. The information presented includes information about each of our director's specific experience, qualifications, attributes and skills that led the Board of Directors to the conclusion that he or she should serve as a director.

Executive Officers



Tony J. Hunt was named President and Chief Executive Officer and has served on the Board since May 2015. He joined Repligen in May 2014 as Chief Operating Officer, overseeing commercial and manufacturing operations. Before coming to Repligen, Mr. Hunt was President of Bioproduction at Life Technologies, a global life sciences company which was acquired by Thermo Fisher Scientific in 2014. He joined Life Technologies in 2008, serving as General Manager of Bioproduction Chromatography and Pharma Analytics before being named President of Bioproduction in 2011. From 2000 to 2008, Mr. Hunt was with Applied Biosystems as Senior Director of Pharma Programs where he launched the Pharma Analytics business that in 2008 became a part of the Bioproduction platform at Life Technologies. Mr. Hunt received a

B.S. in Microbiology and an M.S. in Biotechnology from University College in Galway, Ireland, and an M.B.A. from Boston University School of Management. Mr. Hunt brings to the Board of Directors his deep understanding of the bioprocessing market.



Jon K. Snodgres joined Repligen in July 2014 as the Chief Financial Officer, where he oversees financial operations for the Company. Mr. Snodgres was previously with Maquet Cardiovascular, a medical device company, where he served as CFO for five years. At Maquet, in addition to being responsible for the preparation and oversight of the company's financial statements, he was a key participant in growth planning and profit improvement strategies. Mr. Snodgres previously spent eight years with life sciences company Thermo Fisher Scientific in various roles, most recently as Vice President of Finance for the Laboratory Products Group. He began his career in finance at AlliedSignal/Honeywell International. Mr. Snodgres received a B.S. in Business Administration, Finance from Northern Arizona University.



Ralf Kuriyel joined Repligen in October 2016 as the Senior Vice President, Research and Development where he oversees the Company's research and development efforts. Mr. Kuriyel was previously Vice President of Applications for the single-use business unit within the Life Sciences division of Pall Corporation, whose acquisition by Danaher Corporation was completed in August 2015. At Pall, Mr. Kuriyel served as Vice President of R&D, Field Applications and Process Development Services from November 2014 to October 2016. In addition, Mr. Kuriyel served as Vice President, Applications R&D at Pall from November 2011 to November 2014. Mr. Kuriyel received a B.S. and M.S. in Chemical Engineering from Rensselaer Polytechnic Institute and has completed his coursework for the Tufts University Ph.D. program in Chemical

Engineering. He is an inventor of multiple patents and has co-authored over 30 scientific publications on bioprocessing, including separations technologies, membrane separations methods, protein processing and enhanced microfiltration techniques.

Directors



Nicolas M. Barthelemy has served as a director of Repligen since June 2014. Mr. Barthelemy brings over 25 years of industry experience to the director role. Mr. Barthelemy served as President and CEO of bioTheranostics, a molecular diagnostics company, from September 2014 until February 2017. Prior to bioTheranostics, he served as President, Global Commercial Operations at Life Technologies, which was acquired by Thermo Fisher Scientific in February 2014. Prior to Life Technologies, Mr. Barthelemy was with Biogen Inc. ("Biogen") for eight years, most recently as Vice President, Manufacturing and General Manager for the company's manufacturing organization at Research Triangle Park. He began his career with Merck & Co., Inc. as a Senior Project Engineer, Vaccine Technology. Mr. Barthelemy also serves on the board

of directors of two publicly traded companies; Fluidigm Corporation and Twist Bioscience, and two privately held companies; 908 Devices Inc. and Biocare Medical LLC. Mr. Barthelemy received an M.S. in Chemical Engineering from the University of California, Berkeley, and an engineering degree from Ecole Supérieure de Physique et Chimie Industrielles, Paris. Mr. Barthelemy's qualifications to sit on the Company's Board of Directors include his extensive experience in the bioprocessing field, including large scale biologics manufacturing and commercialization of consumables used in bioprocessing.



Karen A. Dawes, Chairperson of the Board, has served as a director of Repligen since September 2005. She is currently President of Knowledgeable Decisions, LLC, a management consulting firm. Ms. Dawes served from 1999 to 2003 as Senior Vice President and U.S. Business Group Head for Bayer Corporation's U.S. Pharmaceuticals Group. Prior to joining Bayer, she was Senior Vice President, Global Strategic Marketing, at Wyeth LLC ("Wyeth"), a pharmaceutical company (formerly known as American Home Products), where she held responsibility for worldwide strategic marketing. Ms. Dawes also served as Vice President, Commercial Operations for Genetics Institute, Inc., which was acquired by Wyeth in January 1997, designing and implementing that company's initial commercialization strategy to launch BeneFIX® and

Neumega®. Ms. Dawes began her pharmaceuticals industry career at Pfizer, Inc. where, from 1984 to 1994, she held a number of marketing positions, serving most recently as Vice President, Marketing of the Pratt Division. At Pfizer, she directed launches of Glucotrol®/Glucotrol XL®, Zoloft®, and Cardura®. Ms. Dawes also serves on the board of directors of two publicly traded companies: Assertio Therapeutics, Inc. and Medicenna Therapeutics Corp, and on one not-for-profit company, Medicines 360. Ms. Dawes received a B.A. and M.A. in English from Simmons College and an M.B.A. from Harvard University Graduate School of Business. Ms. Dawes' qualifications to sit on the Company's Board of Directors include her extensive strategic experience in both a managerial and consulting capacity with pharmaceutical companies as well as her considerable commercial background.



Rohin Mhatre, Ph.D. was appointed to the Board in March 2020. Dr. Mhatre brings over 25 years of relevant experience to the director role, including his current position since January 2017, as Senior Vice President of Pharmaceutical Development, Engineering and Technology at Biogen. He has held numerous other roles of increasing responsibility within Biogen, which he joined in 1996, including six years as Vice President of Biopharmaceutical Development, where he led a 300-member team responsible for cell line, cell culture, purification and device development. Earlier in Dr. Mhatre's career at Biogen, he focused on building out analytical development and technical services. Prior to Biogen, Dr. Mhatre led the purification and applications group at Applied BioSystems (formerly Perspective Biosystems). Dr. Mhatre holds a Ph.D.

in Chemistry from Northeastern University. Dr Mhatre's qualifications to sit on the Company's Board of Directors include his extensive technical expertise, his leadership abilities and his deep understanding of the dependencies between biological drug development and efficient manufacturing workflows.



Glenn P. Muir has served as a director of Repligen since October 2015. Mr. Muir brings over 30 years of experience to the director role, including 26 years with Hologic, Inc., a large multi-national medical device and diagnostics company where he most recently served as Chief Financial Officer and Executive Vice President. Mr. Muir retired in May 2014 from Hologic, where he helped steer the company's evolution from a venture-backed single product company to a publicly traded diversified organization with over 5,000 employees and \$2.5 billion in revenue. He joined Hologic in 1988 and served as Chief Financial Officer since 1992 and Executive Vice President since 2000. Prior to Hologic, Mr. Muir was with Metallon Engineered Materials Co., a private company where from 1986-1988 he held the role of Vice

President, Finance. Previously, from 1981-1984, he was a Senior Auditor with Arthur Andersen & Co. Mr. Muir also serves on the board of directors of two publicly traded companies; medical technology company Neuronetics, Inc. and life science company G1 Therapeutics, Inc. Previously, Mr. Muir served on the board of directors of ReWalk Robotics Ltd. from July 2014 to December 2017. Mr. Muir is a Certified Public Accountant with a Bachelors of Business Administration from the University of Massachusetts, Amherst. He also earned an M.S. from Bentley University and an M.B.A. from Harvard University. Mr. Muir's qualifications to sit on Repligen's Board of Directors include his extensive experience with integrating strategic acquisitions and leading the financial operations for a global manufacturing and commercial organization.



Thomas F. Ryan Jr. has served as a director of Repligen since September 2003. Mr. Ryan is currently an investor in various private companies. Mr. Ryan served as the President and Chief Operating Officer of the American Stock Exchange from October 1995 to April 1999. Prior to 1995, he held a variety of positions at the investment banking firm of Kidder, Peabody & Co., Inc., serving as the firm's Chairman in 1995. He holds a B.A. from Boston College and is a graduate of the Boston Latin School. Mr. Ryan is a director for the New York State Independent System Operator and a director for BNY Mellon Asset Management Mutual Funds Board. Mr. Ryan's qualifications to sit on the Company's Board of Directors include his years of experience in the areas of securities trading and investment banking.

CERTAIN RELATIONSHIPS AND RELATED PERSONS TRANSACTIONS

No family relationship exists among the officers and directors of Repligen. The Audit Committee conducts an appropriate review of all related party transactions for potential conflict of interest situations on an ongoing basis, and the approval of the Audit Committee is required for all such transactions. The term "related party transactions" shall refer to transactions required to be disclosed by the Company pursuant to Item 404 of Regulation S-K promulgated by the Securities and Exchange Commission ("SEC").

CORPORATE GOVERNANCE AND BOARD MATTERS

BOARD INFORMATION

Director Independence

The Board of Directors has determined that each of the directors who has served during the fiscal year ended December 31, 2019 and each of the nominees for director at the Annual Meeting, with the exception of Mr. Hunt, has no material relationship with the Company and is independent within the meaning of the director independence standards of The Nasdaq Stock Market LLC (the "Nasdaq"). Furthermore, the Board of Directors has determined that each member of the Audit Committee, the Compensation Committee and the Nominating and Corporate Governance Committee of the Board of Directors is independent within the meaning of Nasdaq's director independence standards and that each member of the Audit Committee meets the heightened director independence standards of the SEC for audit committee members.

Board Leadership Structure

The Board is led by its Chairperson, Karen Dawes, who is an independent director. The Board of Directors believes that separating the roles of Chief Executive Officer and Chairperson of the Board is the most appropriate structure for the Company at this time. Having an independent Chairperson ensures that the Chief Executive Officer is accountable for managing the Company in the best interests of shareholders while, at the same time, acknowledging that managing the Board of Directors is a separate and time intensive responsibility. Additionally, this structure ensures a greater role for the non-management directors in the oversight of the Company and active participation of the independent directors in setting agendas and establishing priorities and procedures for the work of the Board of Directors. The Board of Directors also believes that having an independent Chairperson can serve to curb conflicts of interests, promote oversight of risk and manage the relationship between the Board of Directors and the Chief Executive Officer.

Executive Sessions

The Board of Directors holds executive sessions of the independent directors at each Board meeting, preceding or following regularly scheduled in-person meetings of the Board of Directors. Executive sessions do not include any employee directors of the Company, and the Chairperson of the Board is responsible for chairing the executive sessions.

Director Nominations Policies

Director Qualifications

The Nominating and Corporate Governance Committee is responsible for reviewing, from time to time, the appropriate qualities, skills and characteristics desired of Board members in the context of the current make-up of the Board of Directors and selecting or recommending nominees for election as Directors to the Board. This assessment includes consideration of the following minimum qualifications that the Nominating and Corporate Governance Committee believes must be met by all directors:

- Directors must be of high ethical character, have no conflict of interest and share the values of the Company as reflected in the Company's Code of Business Conduct and Ethics;
- Directors must have reputations, both personal and professional, consistent with the image and reputation of the Company;
- Directors must have the ability to exercise sound business judgement;
- Directors must have substantial business or professional experience and be able to offer advice and guidance to the Company's management based on that experience; and
- A director must have (at a minimum) a bachelor's degree or equivalent degree from an accredited college or university.

The Nominating and Corporate Governance Committee also considers numerous other qualities, skills and characteristics when evaluating director nominees, such as:

- An understanding of and experience in biotechnology and pharmaceutical industries;
- An understanding of and experience in accounting oversight and governance, finance and marketing;
- Leadership experience with public companies or other significant organizations; and
- Diversity of personal and professional background, knowledge and experience.

These factors and others are considered useful by the Board and are reviewed in the context of an assessment of the perceived needs of the Board at a particular point in time.

The Nominating and Corporate Governance Committee considers a variety of candidate attributes, including whether a candidate, if elected, assists in achieving a mix of directors who represent a diversity of backgrounds and experience. The Board of Directors seeks members from diverse personal and professional backgrounds (including diversity in knowledge, experience, age, race, gender, ethnicity, culture, nationality and geography), who combine a broad spectrum of relevant industry and strategic experience that, in concert, offer us and our shareholders a range of opinion and insight in the areas most important to us and our corporate mission. Accordingly, in addition to enumerated minimum qualifications above, the Nominating and Corporate Governance Committee is committed to actively seeking out highly qualified women and minority candidates, as well as candidates with other diverse backgrounds, skills and experience when considering director candidates.

Process for Identifying and Evaluating Director Nominees

The Board of Directors is responsible for selecting and nominating nominees for election as directors but delegates the selection and nomination process to the Nominating and Corporate Governance Committee, with the expectation that other members of the Board of Directors or members of management will be requested to take part in the process as appropriate.

Generally, the Nominating and Corporate Governance Committee identifies candidates for director nominees in consultation with management, through the use of search firms or other advisers, through the recommendations submitted by shareholders or through such other methods as the Nominating and Corporate Governance Committee deems to be helpful in identifying candidates. Once candidates have been identified, the Nominating and Corporate Governance Committee confirms that the candidates meet all of the minimum qualifications for director nominees established by the Nominating and Corporate Governance Committee. The Nominating and Corporate Governance Committee may gather information about the candidates through interviews, questionnaires, background checks, or any other means that the Nominating and Corporate Governance Committee deems to be helpful in the evaluation process. The Nominating and Corporate Governance Committee meets as a group to discuss and evaluate the qualities and skills of each candidate, both on an individual basis and taking into account the overall composition and needs of the Board of Directors. Based on the results of the evaluation process, the Nominating and Corporate Governance Committee recommends candidates for the Board's approval as director nominees for election to the Board of Directors. The Nominating and Corporate Governance Committee also recommends candidates for the Board of Directors' appointment to the committees of the Board of Directors.

Procedures for Recommendation of Nominees by Shareholders

The Nominating and Corporate Governance Committee will consider director candidates who are recommended by the shareholders of the Company. Shareholders must deliver any such recommendation not later than the close of business on the 60th day, nor earlier than the close of business on the 90th day, prior to the first anniversary of the preceding year's annual meeting. Shareholders, in submitting recommendations to the Nominating and Corporate Governance Committee for director candidates, shall follow the following procedures:

Such recommendation for nomination should be in writing and include the following:

- Name and address of the shareholder making the recommendation, as they appear on the Company's books and records, and of such record holder's beneficial owner;
- Number of shares of capital stock of the Company that are owned beneficially and held of record by such shareholder and such beneficial owner;
- Number and description of all synthetic equity interests that are held by such shareholder, and whether such synthetic equity interests convey voting rights;
- Name and address of the individual recommended for consideration as a director nominee, or a director nominee;
- The principal occupation of the director nominee;
- The total number of shares of capital stock of the Company that will be voted for the director nominee by the shareholder making the recommendation;
- All other information relating to the director nominee that would be required to be disclosed in solicitations of proxies for the election of directors, or is otherwise required, in each case pursuant to Regulation 14A under the Exchange Act (including the recommended candidate's written consent to being named in the proxy statement as a nominee and to serving as a director if approved by the Board of Directors and elected);
- A written statement from the shareholder making the recommendation stating why such recommended candidate would be able to fulfill the duties of a director;
- Any proxy, agreement, arrangement, understanding or relationship pursuant to which the shareholder making the recommendation
 has or shares a right to, directly or indirectly, vote any shares of any class or series of capital stock of the Company;



- Any rights to dividends or other distributions on the shares of any class or series of capital stock of the Company, directly or
 indirectly, owned beneficially by such recommending shareholder that are separated or separable from the underlying shares of
 the Company; and
- Any performance-related fees that such recommending shareholder, directly or indirectly, is entitled to based on any increase or decrease in the value of shares of any class or series of capital stock of the Company or any synthetic equity interest.

Nominations must be sent to the attention of the Secretary of the Company by one of the two methods listed below:

By U.S. Mail (including courier or expedited delivery service):

Repligen Corporation

Attn: Secretary 41 Seyon Street

Building #1, Suite 100

Waltham, MA 02453

By facsimile at (781) 250-0115:

Attn: Secretary

The Secretary of the Company will promptly forward any such nominations to the Nominating and Corporate Governance Committee. Once the Nominating and Corporate Governance Committee receives the nomination of a candidate, the candidate will be evaluated and a recommendation with respect to such candidate will be delivered to the Board of Directors. Nominations not made in accordance with the foregoing policy shall be disregarded by the Nominating and Corporate Governance Committee and votes cast for such nominees shall not be counted.

Shareholder Communications Policies

The Board of Directors provides to every shareholder the ability to communicate with the Board of Directors, as a whole, and with individual directors on the Board through an established process for shareholder communication (as that term is defined by the rules of the SEC) as follows:

For communications directed to the Board of Directors as a whole, shareholders may send such communication to the attention of the Chairperson of the Board via one of the two methods listed below:

By U.S. Mail (including courier or expedited delivery service):

Repligen Corporation

Attn: Chairperson of the Board of Directors

41 Seyon Street

Building #1, Suite 100

Waltham, MA 02453

• By facsimile at (781) 250-0115:

Attn: Chairperson of the Board of Directors

For shareholder communications directed to an individual director in his or her capacity as a member of the Board of Directors, shareholders may send such communications to the attention of the individual director via one of the two methods listed below:

• By U.S. Mail (including courier or expedited delivery service):

Repligen Corporation

Attn: [Name of Individual Director]

41 Seyon Street

Building #1, Suite 100

Waltham, MA 02453

By facsimile at (781) 250-0115:

Attn: [Name of Individual Director]

The Company will forward any such shareholder communication to the Chairperson of the Board, as a representative of the Board of Directors, and/or to the director to whom the communication is addressed on a periodic basis. The Company will forward such communication by certified U.S. Mail to an address specified by each director of the Board of Directors for such purposes or by secure electronic transmission.



Director Attendance Policy

The Board's policy is that all directors and director nominees are encouraged to attend the Company's Annual Meeting if their schedule permits. All members of the Board of Directors attended the 2019 Annual Meeting.

Stock Ownership and Insider Trading Policies

The Board of Directors has adopted a share ownership policy relating to ownership of the Company's securities by the Company's Chief Executive Officer and the directors. Subject to the terms of the policy, the Chief Executive Officer is required to acquire over a four-year period and hold shares of Common Stock of the Company equal to one times his or her base salary as of a specified measuring date, and each of the Company's non-employee directors is required to acquire over a four-year period and hold shares of Common Stock of the Company equal to three times the Company's annual cash retainer paid to each such non-employee director. Restricted stock and restricted stock units are included once the vesting conditions have been satisfied, but stock options (regardless of whether they are vested or unvested) are not included in the total number of shares owned by the Chief Executive Officer or the directors for purposes of the share ownership policy.

Under the Company's insider trading policy, employees, including executive officers and directors are not permitted to engage in the following transactions with respect to the Company's stock: selling any of the Company's securities that are not owned by such insider at the time of sale ("short selling") and holding the Company's stock in an account that is, or is linked to, a margin account. In addition, the following transactions are not permitted without preapproval of the Company's Audit Committee: buying or selling puts, calls or other derivatives of the Company's securities or any derivative securities that provide the economic equivalent of ownership of any of the Company's securities; engaging in any hedging transaction with respect to the Company's securities; or pledging Company securities as collateral for a loan. Gifts (transfer of the Company's stock without consideration) are subject the same restrictions as all other trades and are prohibited during a period when the insider is not permitted to trade.

Code of Business Conduct and Ethics

Repligen has adopted a Code of Business Conduct and Ethics as its "code of ethics" as defined by regulations promulgated under the Securities Act of 1933 (as amended, the "Securities Act"), and the Exchange Act (and in accordance with the Nasdaq requirements for a "code of conduct"), which applies to all of the Company's directors, officers and employees, including its principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A current copy of the Code of Business Conduct and Ethics is available at the "Investors" — "Corporate Governance" — "Policies and Charters" section of the Company's website at http://www.repligen.com. A copy of the Code of Business Conduct and Ethics may also be obtained free of charge from the Company upon a request directed to Repligen Corporation, Attention: Investor Relations, 41 Seyon Street, Building #1, Suite 100, Waltham, MA 02453. The Company will promptly disclose any substantive changes in or waivers, along with reasons for the waivers, of the Code of Business Conduct and Ethics granted to its executive officers, including its principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, and its directors by posting such information on its website at http://www.repligen.com under "Investors" — "Corporate Governance."

The Board's Role in Risk Oversight

The Company's management is responsible for assessing and managing risk and the Board of Directors oversees and reviews the Company's risk management process. This oversight by the Board of Directors is primarily accomplished through its committees and through management's reporting processes, including receiving regular reports from members of senior management on areas of material risk to the Company, including operational, financial, legal and regulatory, strategic, and governance risks.

The committees of the Board of Directors execute their oversight responsibility for risk management as follows:

- The Audit Committee is responsible for overseeing the Company's internal financial and accounting controls, work performed by
 the Company's independent registered public accounting firm and the Company's independent reviewer of internal controls. As
 part of its oversight function, the Audit Committee regularly discusses with management and the Company's independent registered
 public accounting firm the Company's major financial and controls-related risk exposures and steps that management has taken to
 monitor and control such exposures.
- The Compensation Committee is responsible for overseeing risks related to the Company's cash and equity-based compensation programs and practices. As part of its oversight function, the Compensation Committee periodically discusses with the President and Chief Executive Officer as well as the Board of Directors, as necessary, the compensation plan for both executive officers and the non-employee directors, performance goals and objectives for the period and related achievement, peer group and other relevant compensation benchmarks and practices and other matters to ensure the Company's compensation practices are in the best interest of the Company and its shareholders.

• The Nominating and Corporate Governance Committee is responsible for overseeing risks related to the composition and structure of the Board of Directors and its committees and the Company's corporate governance which includes oversight of its Environmental, Social and Governance ("ESG") practices. With respect to the composition of the Board of Directors and its committees, the Nominating and Corporate Governance Committee on an annual basis, assesses the qualifications, independence and diversity of members of the Board of Directors and makes membership recommendations. With respect to the Company's ESG practices, the Nominating and Corporate Governance Committee reports to the Board periodically on ESG objectives and status.

Environmental, Social and Governance Practices Oversight

The Nominating and Corporate Governance Committee is responsible for overseeing the Company's practices and initiatives with respect to ESG factors, as set forth in the committee's charter. As a global organization, the Company recognizes the importance of corporate responsibility and sustainability in the communities in which Repligen and its customers and suppliers operate.

Under the oversight of the Nominating and Corporate Governance Committee, the Company in 2019 embarked on a comprehensive ESG program to assess, benchmark and prioritize its sustainability practices. As a result, the Company has established a clear framework to guide our future efforts. In doing so, we plan to leverage guidance from the Sustainability Accounting Standards Board ("SASB") standards for the medical equipment and supplies industry. We have identified key pillars that we believe reflect areas most critical and relevant to the Company in context of our industry, where we play an important role in human health, not as a biopharmaceutical developer but as a key supplier of the tools and technologies that improve and optimize the process for manufacturing these critical medicines. The Company will continue to evolve our ESG disclosures to give shareholders and other stakeholders increased visibility into our ESG activities, such as:

- Environmental Stewardship: We strive to minimize the waste, water and energy impacts of our day-to-day operations and in our
 products' lifecycle. We have formed a working group comprised of employees and management from across our organization.
 This working group also establishes corporate policies and practices focused on our corporate headquarters and seven global
 manufacturing facilities.
- Human Capital Management, Employee and Product Safety: We believe our success begins with hiring and developing a highly skilled and motivated employee base. We also understand the importance of a diverse and inclusive workforce and ensuring their safety and investing in the communities in which we live and operate.
- Corporate Governance: We will continue to uphold our strong corporate governance, shareholder rights and executive
 compensation programs. This is demonstrated in our longstanding data security and privacy measures with respect to safeguarding
 clients and employee information, our effective collaborations with our suppliers through partnerships, our active monitoring of
 inventory, sourcing and critical materials risks, and our emphasis on ethical and responsible business practices in our workforce
 trainings.

Shareholder Outreach

We value the views and insights of our shareholders and conduct regular outreach to ensure open lines of communication. Our Board and management engage with and listen to our shareholder through a robust schedule of investor meetings, conferences, roadshows and special events. Throughout 2019, in addition to our traditional Investor Relations outreach efforts through which we directly engaged with shareholders representing over 60% of our outstanding shares, we also engaged with proxy governance teams at institutions representing over 30% of outstanding shares. These discussions covered a range of topics including our business and financial performance and strategies, corporate governance and executive compensation programs, and environmental and social matters.

Each of the proxy governance conversations included at least one member of our Board as appropriate. Our shareholder engagement activities have influenced Board meeting agendas and have led to governance enhancements that help us address the issues that matter most to our shareholders. We consider this ongoing engagement process important in creating long-term value, in maintaining a culture of integrity, compliance and sustainability, and informing our ESG activities.

BOARD MEETINGS AND COMMITTEES

The Board of Directors of the Company met eight times during the fiscal year ended December 31, 2019. During the fiscal year ended December 31, 2019, no director attended fewer than 75% of the aggregate of each of: (i) the total number of meetings of the Board of Directors; and (ii) the total number of meetings held by all committees of the Board of Directors on which such director served. The Board of Directors has a standing Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee. Each standing committee has a charter that has been approved by the Board of Directors. Each standing committee reviews the appropriateness of its charter periodically, as conditions dictate, but at least annually.

Audit Committee

The Audit Committee was established in accordance with section 3(a)(58)(A) of the Exchange Act and currently consists of Messrs. Muir, Cox and Ryan. Ms. Dawes has been appointed to replace Mr. Cox as a member of the Audit Committee effective as of the close of the Annual Meeting. The Audit Committee is responsible for overseeing the accounting and financial reporting processes of the Company and the audits of the financial statements of the Company and exercising the responsibilities and duties set forth below, including but not limited to: (a) appointing, compensating and retaining the Company's independent registered public accounting firm, (b) overseeing the work performed by any independent registered public accounting firm, including conduct of the annual audit and engagement for any other services, (c) assisting the Board of Directors in fulfilling its responsibilities by reviewing: (i) the financial reports provided by the Company to the SEC, the Company's shareholders or to the general public, and (ii) the Company's internal financial and accounting controls, (d) recommending, establishing and monitoring procedures designed to improve the quality and reliability of the disclosure of the Company's financial condition and results of operations, (e) establishing procedures designed to facilitate (i) the receipt, retention and treatment of complaints relating to accounting, internal accounting controls or auditing matters and (ii) the receipt of confidential, anonymous submissions by employees of concerns regarding questionable accounting or auditing matters, (f) engaging advisors as necessary, and (g) serving as the Qualified Legal Compliance Committee in accordance with Section 307 of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated by the SEC thereunder. The Audit Committee met four times during the fiscal year ended December 31, 2019. Mr. Muir currently serves as Chairperson of the Audit Committee. The Board has determined that Mr. Muir qualifies as an "audit committee financial expert" under the rules of the SEC. The Board has determined that each member of the Audit Committee is independent within the meaning of the Nasdaq's director independence standards and the SEC's heightened director independence standards for audit committee members as determined under the Exchange Act.

The Audit Committee operates under a written charter adopted by the Board, a current copy of which is available on the Company's website at http://www.repligen.com under "Investors" — "Corporate Governance" — "Policies and Charters."

Compensation Committee

The Compensation Committee, of which Mr. Barthelemy, Mr. Muir and Dr. Mhatre, are currently members, is responsible (among other duties and responsibilities) for (a) discharging the Board of Directors' responsibilities relating to the compensation of the Company's executive officers, (b) administering the Company's cash incentive compensation and equity incentive plans, (c) reviewing and discussing with management the Compensation Discussion and Analysis for inclusion in the Company's proxy statement in accordance with applicable rules and regulations, (d) reviewing and making recommendations to management on company-wide compensation programs and practices, (e) taking final action with respect to the individual salary, bonus and equity arrangements of the Company's Chief Executive Officer and other executive officers, and (f) recommending, subject to approval by the full Board of Directors, new equity-based plans and any material amendments thereto (including increases in the number of shares of Common Stock available for issuance thereunder) for which shareholder approval is required or desirable. The Compensation Committee met six times during the fiscal year ended December 31, 2019. Mr. Barthelemy serves as the Chairperson of the Compensation Committee. The Board has determined that each member of the Compensation Committee is independent within the meaning of the SEC and Nasdaq's director independence standards.

The Compensation Committee operates under a written charter adopted by the Board of Directors, which is available on the Company's website at http://www.repligen.com under "Investors" — "Corporate Governance" — "Policies and Charters."

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee of the Board of Directors consists of Ms. Dawes, Chairperson, Mr. Barthelemy and Mr. Ryan. The Nominating and Corporate Governance Committee met twice during the fiscal year ended December 31, 2019.

The Nominating and Corporate Governance Committee is responsible for: (a) identifying individuals qualified to become members of the Board of Directors, and selecting or recommending that the Board of Directors select the director nominees for election, (b)



monitoring compliance with and periodically reviewing the Code of Business Conduct and Ethics, and (c) overseeing the Company's practices and proposed initiatives related to environmental, social and governance matters. The Nominating and Corporate Governance Committee may also consider director nominees recommended by the Company's shareholders as described above.

Ms. Dawes serves as the Chairperson of the Nominating and Corporate Governance Committee. The Board of Directors has determined that each member of the Nominating and Corporate Governance Committee is independent within the meaning of the SEC's and Nasdaq's director independence standards.

The Nominating and Corporate Governance Committee operates under a written charter adopted by the Board, which is available on the Company's website at http://www.repligen.com under "Investors" — "Corporate Governance" — "Policies and Charters."

PROPOSAL 2

RATIFICATION OF THE SELECTION OF OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee of the Board has appointed Ernst & Young LLP, an independent registered public accounting firm, to serve as independent auditors for the fiscal year ended December 31, 2019. Ernst & Young LLP has served as the Company's independent registered public accounting firm since 2002. In accordance with standing policy, Ernst & Young LLP periodically changes the personnel who work on the audits of the Company.

Audit and Non-Audit Fees

The following sets forth the aggregate fees billed by Ernst & Young LLP to the Company during the fiscal years ended December 31, 2019 and 2018:

	FY2019	FY2018
Audit Fees	\$ 3,333,000	\$ 2,470,000
Audit Related Fees	215,000	_
Tax Fees	_	10,000
All Other Fees	3,000	2,000
Total	\$ 3,551,000	\$ 2,482,000
		

Audit Fees

Fees for audit services were approximately \$3,333,000 and \$2,470,000 for the fiscal years ended December 31, 2019 and 2018, respectively. These amounts included fees associated with the annual audit of the consolidated financial statements, reviews of the Company's Form 10-Q and fees associated with the statutory filings and filings with the SEC.

Audit Related Fees

For the fiscal year ended December 31, 2019, the Company incurred fees of approximately \$215,000 for due diligence activities related to the acquisition of C Technologies, Inc.

Tax Fees

Fees billed for tax services were approximately \$10,000 for the fiscal year ended December 31, 2018. This amount included fees associated with tax compliance, consulting and related services.

All Other Fees

Ernst & Young LLP billed \$2,000 in additional fees in each of the fiscal years ended December 31, 2019 and 2018 relating to a subscription to Ernst & Young LLP's online accounting research service.

The Audit Committee of the Board has implemented procedures under the Company's Audit Committee Pre-Approval Policy for Audit and Non-Audit Services (the "Pre-Approval Policy"), to ensure that all audit and permitted non-audit services provided to the Company are approved by the Audit Committee. Specifically, the Audit Committee pre-approves the use of Ernst & Young LLP for specific audit and non-audit services, within approved monetary limits. If a proposed service has not been pre-approved pursuant to the Pre-Approval Policy, then it must be specifically pre-approved by the Audit Committee before Ernst & Young LLP may provide the services. Any pre-approved services exceeding the limits pre-approved by the Audit Committee must again be pre-approved by the Audit Committee. All of the audit-related, tax and all other services provided by Ernst & Young LLP to the Company for the fiscal year ended December 31, 2019 were reviewed with the Audit Committee, which concluded that the provisions of such services by Ernst & Young LLP was compatible with the maintenance of that firm's independence in the conduct of its auditing functions.

In connection with the audit for the fiscal year ended December 31, 2019, there were no disagreements with Ernst & Young LLP on any matter of accounting principles or practices, financial statement disclosure or auditing scope or procedure, which, if not resolved to the satisfaction of Ernst & Young LLP, would have caused them to refer to such disagreement in connection with their report.

A member of Ernst & Young LLP is expected to be present at the Annual Meeting with the opportunity to make a statement if so desired and will be available to respond to appropriate questions.

Accordingly, the Board believes ratification of the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the current year is in the best interests of the Company and its shareholders and recommends a vote FOR the ratification of Ernst & Young as the Company's independent registered public accounting firm.

AUDIT COMMITTEE REPORT

This report is furnished by the Company's Audit Committee with respect to the Company's financial statements for fiscal year 2019. The Company's management is responsible for the preparation and presentation of complete and accurate financial statements. The independent registered public accounting firm Ernst & Young LLP is responsible for performing an independent audit of the Company's financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB") and for issuing a report on its audit. The Audit Committee oversees and monitors the Company's management and its independent registered public accounting firm throughout the financial reporting process.

The material in this report is not "soliciting material," is not deemed filed with the SEC, and is not to be incorporated by reference in any filing of the Company under the Securities Act or under the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

The Audit Committee currently consists of Mr. Muir, Chairperson, Mr. Cox and Mr. Ryan. The Audit Committee has the responsibility and authority described in the Repligen Audit Committee Charter, which has been approved by the Board. The Board of Directors has determined that the members of the Audit Committee meet the independence requirements set forth in Rule 10A-3(b)(1) under the Exchange Act, as amended, and the applicable rules of the National Association of Securities Dealers, Inc. and that Mr. Muir qualifies as an "audit committee financial expert" under the rules of the SEC. The Audit Committee oversees the accounting and financial reporting processes of the Company and the audits of the financial statements of the Company. Management has the primary responsibility for the financial statements and the reporting process, including the systems of internal controls.

In fulfilling its oversight responsibilities, the Audit Committee reviewed and discussed with management of the Company and Ernst & Young LLP the audited financial statements included in the Company's Annual Report on Form 10-K ("Form 10-K") for the fiscal year ended December 31, 2019, including a discussion of the quality, not just the acceptability, of the accounting principles, the reasonableness of significant judgments and the clarity of disclosures in the financial statements. The Audit Committee also reviewed the Company's quarterly financial statements for the first three fiscal quarters during the fiscal year ended December 31, 2019 and discussed them with both the management of the Company and Ernst & Young LLP prior to including such interim financial statements in the Company's Quarterly Reports on Form 10-Q ("Form 10-Q"). In connection with the Company's Form 10-K for the fiscal year ended December 31, 2019 and the Form 10-Q for each of its first, second and third fiscal quarters of the fiscal year ended December 31, 2019, the Audit Committee discussed the results of the Company's certification process relating to the statements in the Company's Form 10-Qs, as well as financial statements under Sections 302 and 906 of the Sarbanes-Oxley Act. The audit committee also discussed with Ernst & Young LLP the matters required to be discussed by the PCAOB's Auditing Standard No. 1301, Communication with Audit Committees, and the SEC. In addition, the Audit Committee has received from Ernst & Young LLP the written disclosures and the letter from Ernst & Young LLP as required by applicable requirements of the PCAOB regarding Ernst & Young LLP's communications with the Audit Committee concerning independence and has discussed with Ernst & Young LLP their independence.

The Audit Committee also reviewed management's report on its assessment of the effectiveness of the Company's internal control over financial reporting and Ernst & Young LLP's report on the effectiveness of the Company's internal control over financial reporting.

The Audit Committee discussed with Ernst & Young LLP the overall scope and plans for their audit. The Audit Committee met with Ernst & Young LLP to discuss the results of their examinations, their evaluations of the Company's internal controls, including internal control over financial reporting, and the overall quality of the Company's financial reporting.

The Audit Committee has also evaluated the performance of Ernst & Young LLP, including, among other things, the amount of fees paid to Ernst & Young LLP for audit and non-audit services. Based on its evaluation, the Audit Committee has selected Ernst & Young LLP to serve as the Company's auditors for the fiscal year ending December 31, 2020. The shareholders of the Company are being asked to ratify the selection of Ernst & Young LLP as the Company's independent public accounting firm in Proposal 2 of this Proxy Statement.

The Audit Committee met four times during the fiscal year ended December 31, 2019. In reliance on the reviews and discussions referred to above, the Audit Committee recommended to the Board of Directors that the Company's audited financial statements and management's assessment of the effectiveness of the Company's internal control over financial reporting be included in the Form 10-K for the fiscal year ended December 31, 2019 filed with the SEC, and the Board of Directors approved such inclusion.

Respectfully submitted by the Audit Committee,

Glenn P. Muir, Chairperson John G. Cox Thomas F. Ryan, Jr.

PROPOSAL 3 ADVISORY VOTE ON EXECUTIVE COMPENSATION

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act"), enables our shareholders to vote to approve, on an advisory basis, the compensation of our named executive officers as disclosed in this proxy statement in accordance with the SEC's rules.

As described in the sections entitled "Compensation Discussion and Analysis" and in the accompanying tables and narrative disclosure, our executive compensation programs are designed to motivate our executive officers to enhance shareholder value, to provide a fair reward for this effort and to stimulate our executive officers' professional and personal growth. The Company seeks to provide near-term and long-term financial incentives that align the executive officers' interest with those of the shareholders and focus executive officer behavior on the achievement of near-term corporate goals, as well as long-term business objectives and strategies. We believe that this alignment between executive compensation and shareholder interests has driven corporate performance over time.

Our shareholders voted on May 18, 2017, to have advisory votes every year to approve the compensation paid to the Company's named executive officers, and we have adopted that approach. The Board of Directors and Compensation Committee make executive compensation decisions every year, and our directors will look to the annual advisory vote for information to be taken into account when they make decisions with respect to our compensation philosophy, policies and practices. Accordingly, we are asking our shareholders to vote FOR the following non-binding, advisory resolution on the approval of the compensation of the Company's named executive officers as disclosed in this proxy statement:

"RESOLVED, that the shareholders of the Company approve, on an advisory basis, the compensation of the Company's named executive officers, as disclosed in this proxy statement, including the Compensation Discussion and Analysis, compensation tables and narrative discussion."

We urge you to read the Compensation Discussion and Analysis section of this proxy statement and the accompanying tables and narrative disclosure for additional details on the Company's executive compensation, including our governance, framework, components, and the compensation decisions for the named executive officers for the fiscal year ended December 31, 2019.

As an advisory vote, the results of this vote will not be binding on the Board of Directors or the Company. However, the Board of Directors and the Compensation Committee value the opinions of our shareholders and will consider the outcome of the vote when making future decisions on the compensation of our named executive officers and the Company's executive compensation principles, policies and procedures.

The Board of Directors recommends that shareholders vote FOR approval, on an advisory basis, of the compensation of the Company's named executive officers, as disclosed in this proxy statement, including the Compensation Discussion and Analysis, compensation tables and narrative discussion.

COMPENSATION COMMITTEE REPORT

The Compensation Committee of the Board of Directors, which is comprised solely of independent directors within the meaning of applicable rules of Nasdaq, outside directors within the meaning of Section 162(m) of the Internal Revenue Code of 1986, as amended(the "Code"), and non-employee directors within the meaning of Rule 16b-3 under the Securities Exchange Act of 1934, is responsible for developing executive compensation policies and advising the Board of Directors with respect to such policies and administering the Company's cash and equity incentive plans. The Compensation Committee sets performance goals and objectives for the Chief Executive Officer and the other executive officers, evaluates their performance with respect to those goals and sets their compensation based upon the evaluation of their performance. In evaluating executive officer pay, the Compensation Committee may retain the services of a compensation consultant and consider recommendations from the Chief Executive Officer with respect to goals and compensation of the other executive officers. The Compensation Committee assesses the information it receives in accordance with its business judgment. The Compensation Committee also periodically reviews non-employee director compensation. All decisions with respect to executive compensation are approved by the Compensation Committee and all decisions with respect to director compensation are recommended by the Compensation Committee to the full Board of Directors for approval.

The Compensation Committee of the Company has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management and, based on such review and discussions, the Compensation Committee

recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this proxy statement.

Respectfully submitted by the Compensation Committee:

Nicolas M. Barthelemy, Chairperson Glenn P. Muir Rohin Mhatre, Ph.D.

COMPENSATION DISCUSSION AND ANALYSIS

2019 Year in Review

We view our annual achievements in the context of our long-term goals, including our goal to become a technology and market leader in bioprocessing.

For the fiscal year ended December 31, 2019, we made strong progress toward our long-term goals through a combination of organic growth, new product development and success of recent acquisitions. We are keenly focused on achieving our corporate goals, in alignment with our broader purpose to return long-term value to our customers and shareholders.

Among our accomplishments in the fiscal year ended December 31, 2019 were the following:

- Our revenue increased to \$270.2 million, a gain of 39% over the prior year. Organic sales increased by 33% over the prior year, driven by acceleration in market demand across our Filtration, Chromatography and Proteins product groups.
 - Filtration products grew at 33% organically over the prior year. We expanded applications for our XCell ATF® product line
 where single-use sales increased by 45%, and we saw robust demand for Spectrum KrosFlo® Systems and TangenX®, SIUS®
 flat sheet TFF products.
 - Chromatography products grew at 43% organically over the prior year, driven by demand for disposable OPUS® Columns, where units and sales increased 50%.
 - Proteins products grew at 24% organically, with exceptional strength in our growth factors business and double-digit growth in affinity ligands.
- We benefited from demand in cell and gene therapy, a relatively new class of biologics that represented approximately 15% of our revenue in 2019, primarily through Filtration and Chromatography product sales. In gene therapy, our focus is on helping customers to scale and optimize viral vector manufacturing processes to improve product yield.
- We continued to invest in future growth, with approximately 7% of revenue dedicated to new product development; capital expenditures of \$23.2 million to support IT systems investments and expansion of our facilities to increase manufacturing capacity; and \$239.9 million spent to fund our acquisition of C Technologies, Inc. ("C Technologies").
- We acquired C Technologies, establishing a Process Analytics franchise with foundational VPE Slope Spectroscopy® technology
 for protein concentration measurement. The \$239.9 million acquisition was funded through payment of approximately \$195
 million in cash and 779,221 unregistered shares of the Company's Common Stock totaling \$53.9 million. We recorded revenue
 from C Technologies of \$16.4 million from May 31, 2019 to December 31, 2019, which was in line with our goals for 2019.
- We continue to scale our organization, deploying a new systems team to support our Filtration business with integrated equipment
 and consumables solutions, and expanding our commercial team to a total of 140 individuals focused on supporting and building
 our customer base.
- On the R&D front, the highlight of 2019 was the introduction of KrosFlo TFDF™, a novel technology for harvest clarification that
 unites the benefits of tangential flow and depth filtration into one integrated solution. In addition to KrosFlo TFDF, we advanced
 a number of R&D programs, with our next-generation XCell™ Controller, TangenX™, SIUS™ Gamma and new affinity ligands
 reaching final stages of product development.
- We raised close to \$500 million (net) through a series of equity and convertible debt financings, to support potential acquisitions and internal investments.
 - We raised \$320.7 million, net of underwriting discounts, commissions and other estimated offering expenses, from the public offerings of the Company's Common Stock in 2019.
 - We issued \$287.5 million aggregate principal amount of 0.375% Convertible Senior Notes due 2024 for net proceeds of approximately \$278.5 million. The Company utilized a portion of these proceeds to settle its outstanding 2.125% Convertible Senior Notes due 2021 of \$115.0 million.

- We invested in expanding our Chromatography and Filtration manufacturing capacity in the United States to stay ahead of demand driven by increased customer adoption and penetration of our products and widening global markets for biological medicines. We increased our OPUS capacity five-fold, and centralized manufacturing of XCell ATF at our Filtration Center of Excellence in Marlborough, Massachusetts.
- We increased our office and manufacturing capacity in Waltham, Massachusetts by approximately 32,000 square feet and completed our Phase 1 implementation of a new worldwide Enterprise Resource Planning ("ERP") system.
- We generated free cash flow of \$44.1 million, an increase of 135% compared to 2018, and reported cash and cash equivalents of \$528.4 million.

In summary, we surpassed our business and financial goals for 2019, staying true to our course of creating and leading new markets through technology innovation. We focused on differentiated products suited to the complexities and pressures of modern biopharmaceutical manufacturing; with single-use and flexible solutions that are "inspiring advances in bioprocessing."

Compensation Philosophy

The Company's compensation philosophy is to provide compensation that will attract and maintain high-performing talent in our industry, motivate the Company's executive officers to create long-term value and enhance shareholder value, provide a fair reward for their effort and stimulate our executive officers' professional and personal growth. The Company believes that the compensation of its executive officers should align the executive officers' interests with those of the shareholders and focus executive officer behavior not only on the achievement of near-term corporate goals, but also on the achievement of long-term business objectives and strategies.

It is the responsibility of the Compensation Committee of the Board to administer the Company's compensation programs to ensure that they are competitive with other bioprocessing, healthcare supply and biotechnology companies and to include incentives that are designed to appropriately drive the Company's continued development. The Compensation Committee reviews and approves all components of the Company's executive officer compensation, including base salaries, annual cash incentive compensation, and equity incentive compensation.

Compensation Objectives

The Company's compensation programs for its executive officers are designed to provide the following:

- annual cash incentive compensation that motivates the executive officers to manage the business to meet the Company's short- and long-term objectives;
- equity incentive compensation, including performance-based equity awards to ensure that its executive officers are motivated over
 the long-term to respond to the Company's business challenges and opportunities as owners and not just as employees, thereby
 aligning the executive officers' interests with those of shareholders; and
- compensation that is competitive with other bioprocessing, healthcare supply and biotechnology companies with which the Company competes for talent, determined by comparing the Company's pay practices with these companies.

The following features of our compensation program are designed to align the interests of our executive team with those of our shareholders and with market best practice:

	We Do		We Don't
✓	We emphasize performance-based compensation that aligns the interests of our shareholders and executive officers through the use of both short-term cash incentive compensation and equity awards subject to both time and performance-based vesting.	X	We do not allow hedging or pledging of our securities without pre-approval.
✓	We maintain an industry-specific peer group for benchmarking pay.	X	We do not allow for re-pricing of stock options without shareholder approval.
√	We target pay based on market norms.	X	We do not provide excessive perquisites.
✓	We offer market-competitive benefits for executives that are consistent with the benefits we offer all of our employees.	X	We do not provide supplemental executive retirement plans.
✓	We consistently engage an independent compensation consultant to advise on compensation levels and practices.	X	We do not provide tax gross-up payments.
✓	We maintain stock ownership guidelines that require our directors, including the Chief Executive Officer, to maintain a specified level of ownership.	X	We do not provide guaranteed bonuses to our executive officers.
✓	We have a clawback policy covering cash and equity incentive compensation paid to our Chief Executive Officer and other executive officers.		

Compensation Evaluation Processes

The Company's executive officer compensation consists of three primary components: base salary, annual cash incentive compensation and equity incentive compensation. Each of these components is intended to complement the others, and taken together, to satisfy the Company's compensation objectives. The Compensation Committee considers a number of factors in setting compensation for its executive officers, including Company performance, the executive's functional performance, experience and responsibilities, and the compensation of executive officers in similar positions in our peer group of companies.

In evaluating our executive compensation programs for the fiscal year ended December 31, 2019, the Compensation Committee considered the shareholder advisory vote on our executive compensation, (the "say-on-pay vote"), for the fiscal year ended December 31, 2018, which was approved by 69.9% of the votes cast. Leading up to and following our 2019 Annual Meeting of Shareholders, we contacted 11 shareholders representing more than 35% of our public float and over 30% of our outstanding Common Stock to discuss and solicit feedback regarding our executive compensation program. Discussions with these shareholders were generally led by our Board Chairperson, who also chairs the Nominating and Corporate Governance Committee, and the Chair of our Audit Committee, who sits on the Compensation Committee, with input from the Chair of our Compensation Committee. All feedback received was shared and discussed with the Compensation Committee and the full Board of Directors. On-going discussions with shareholders provide an opportunity for us to receive input of our shareholders regarding program design and details and to discuss the philosophy and structure of our executive compensation program, all of which help to guide us in refining the design of our compensation program and in the preparation of our executive compensation disclosure in our annual proxy statement. In light of these discussions and shareholder feedback, along with our own internal Committee and Board discussions, we increased our emphasis on awards of equity incentives to further align the interests of our named executive officers with those of our shareholders and introduced equity awards that vest only if we achieve pre-determined performance goals intended to drive the growth of our business

and long-term shareholder value. The Compensation Committee intends to continue to focus on aligning executive compensation programs with the interests of our shareholders and current market practice, including a continued emphasis on pay for performance. In addition, we believe the Chief Executive Officer's 2019 compensation will be viewed more favorably by investors. In 2018, Mr. Hunt's reported compensation may have appeared high to some shareholders due to a special long-term equity award made to Mr. Hunt. This award, which vests over nine years, was in recognition of Mr. Hunt's strategic vision and direction, his consistently superior individual performance, which was reflected in the Company's successful performance since his transition from Chief Operating Officer to Chief Executive Officer in May 2015, as well as his important role in and potential future contributions to the Company's successful creation of long-term value. The 2018 special award was a one-time special incentive and no such award was made in 2019 or is contemplated for the future. We currently hold a say-on-pay vote on an annual basis, and our Board of Directors intends to continue to do so until at least our next shareholder advisory vote on the frequency of say-on-pay votes to approve our executive compensation, which will occur no later than our 2023 annual meeting of shareholders.

In establishing compensation levels for each executive officer, the Compensation Committee has the authority to engage the services of outside experts. In the fiscal year ended December 31, 2019, the Compensation Committee retained Meridian Compensation Partners, LLC ("Meridian"), an independent compensation consulting firm, to assist the Compensation Committee in assessing the competitiveness and effectiveness of the Company's executive compensation programs. In addition, our finance and human resources departments support the Compensation Committee in its work and act in accordance with the direction given to them to administer our compensation programs.

The Compensation Committee has assessed any potential conflicts of interest raised by the work of Meridian, our compensation consultant, pursuant to SEC rules and has determined that no such conflict of interest exists.

During the fiscal year ended December 31, 2019 and in January and February 2020, the Compensation Committee held meetings with management and representatives of Meridian to:

- review our compensation objectives;
- review the actual compensation of our executive officers for consistency with our objectives;
- analyze trends in executive compensation;
- assess our variable cash compensation structure, as well as incentive plan components and mechanics, to ensure an appropriate
 correlation between pay and performance with resulting compensation opportunities that balance returns to the Company and its
 shareholders;
- assess our equity-based awards programs against our objectives of executive incentive, retention and alignment with shareholder interests;
- review our peer group and consider appropriate changes related to the realignment of our business;
- benchmark our executive cash compensation and equity-based awards programs, and assess our pay versus performance against our peer group; and
- review recommendations for fiscal year 2020 compensation for appropriateness relative to our compensation objectives.

In January 2019, Meridian provided the Compensation Committee with a final analysis of base salary, target bonus, target total cash, long-term incentive value and design and target total compensation for executives, and cash and equity compensation for non-employee directors, of comparable companies in the biotechnology and health care supplies industries. In performing this analysis, Meridian used a peer group of 17 biotechnology and health care supply companies, which was reviewed and approved by our Compensation Committee. Each year, Meridian, in conjunction with our Compensation Committee, revaluates our peer group in light of developments in the market and our industry. As a result of this review, four companies were added to the peer group and four companies were removed from the peer group compared to the prior year. The companies included in the peer group had revenues with a median of \$326.0 million, as compared to the Company's total revenue of \$194.0 million in fiscal year 2018.

The peer group used in the report presented for consideration of 2019 compensation decisions and approved by the Compensation Committee consisted of the following companies:

AMAG Pharmaceuticals, Inc. Anika Therapeutics, Inc. Atricure, Inc.

Bio-Techne Corporation Brooks Automation, Inc. Cambrex Corporation Fibrogen, Inc.
Fluidigm Corporation
Globus Medical, Inc.
Halozyme Therapeutics Inc.
Harvard Bioscience, Inc.
Luminex Corporation

Medpace Holdings, Inc. Meridian Biosciences, Inc. Mesa Laboratories, Inc. Neogen Corporation NeoGenomics, Inc. The Compensation Committee uses the peer group compensation data as one of several factors in determining appropriate compensation parameters for base salary, variable cash compensation and equity-based, long-term incentives. The Compensation Committee's executive compensation decisions are made on a case-by-case basis, and specific benchmark results do not, in and of themselves, determine individual target compensation decisions.

As summarized below, Meridian's review of peer companies revealed that the Company's base salaries for its named executive officers were near the 50th percentile of peer group companies, target bonus percentages were near the 50th percentile of peer group companies, and long-term incentives were both above and below the 50th percentile of peer group companies, depending on the named executive officer's position, for the fiscal year ended December 31, 2019.

Base Salary as Compared to 50th Percentile of Peer Group

Tony J. Hunt \$	685.000	4	150,000	
	000,000	Φ	650,000	5.4%
Jon K. Snodgres \$	371,315	\$	400,243	(7.2%)
Ralf Kuriyel \$	336,000	\$	347,372	(3.3%)

Target Bonus Percentage as Compared to 50th Percentile of Peer Group

Name	Target Bonus Percentage for the Fiscal Year Ended December 31, 2019	50 th Percentile Target Bonus for Position in Peer Group
Tony J. Hunt	90%	81%
Jon K. Snodgres	50%	50%
Ralf Kuriyel	50%	45%

Long-Term Incentives as Compared to Peer Group

Since 2013, the Compensation Committee has made annual grants of stock options and/or restricted stock units subject to time-based vesting to align the executive officers' financial interest with those of shareholders and, in 2019, we introduced performance-based restricted stock units to our long-term equity incentive compensation program. Based on Meridian's review of our peer group, the majority of companies in the peer group made long-term incentive awards to executive officers on an annual basis. The Compensation Committee believes that equity incentives, in the form of stock options, restricted stock units and restricted stock awards, subject to vesting over time or upon achievement of performance objectives, can be an effective vehicle for the long-term element of compensation, as these awards align individual and team performance with the achievement of the Company's strategic and financial goals over time, and with shareholders' interests. Stock options, which have exercise prices equal to at least the fair market value of the Company's stock on the date of grant, reward executive officers only if the stock price increases from the date of grant. Restricted stock units and restricted stock awards are impacted by all stock price changes, so the value to the executive officers is affected by both increases and decreases in stock price. In February 2019, the Compensation Committee, based on Meridian's review of peer group data, granted stock options and restricted stock units subject to time-based vesting over three years and restricted stock units that are earned and vest only if we achieve certain pre-determined performance metrics to its named executive officers. The size of these grants is based on target long-term incentive levels for each of the named executive officers.

The Compensation Committee anticipates that it will continue to conduct similar annual reviews of our executive compensation practices and use independent outside consultants for similar services in the future.

Executive Compensation

Each executive officer (except our Chief Executive Officer, whose performance is reviewed directly by the Board Chair and Compensation Committee) has an annual performance review with our Chief Executive Officer, who makes recommendations on salary increases, promotions and equity and non-equity incentive awards to the Compensation Committee. The Compensation Committee believes its executive compensation programs for the fiscal year ended December 31, 2019, appropriately rewarded the executives based on the Company's accomplishments during the year, including the strong growth in product revenue, improvement in gross and operating profit, improvement of production efficiencies, development of new product offerings and the continued integration of prior acquisitions.

Base Salary

Base salary represents the fixed portion of an executive officer's compensation and is intended to provide compensation for day-to-day performance. The Compensation Committee believes that a competitive base salary is a necessary element of any compensation program that is designed to attract and retain talented and experienced executives. Each executive officer's base salary is initially determined upon hire or promotion based on the executive officer's responsibilities, prior experience, individual compensation history and salary levels of other executives within the Company and similarly situated executives within our peer group. Base salary is typically reviewed annually. The Compensation Committee believes that the base salaries paid to our executive officers during the fiscal year ended December 31, 2019 achieved the Company's compensation objectives. Base salaries for the named executive officers for 2020, 2019 and 2018 are as follows:

Name	2020 Base Salary (\$) ⁽¹⁾	2019 Base Salary (\$) (1)	2018 Base Salary (\$)	Base Salary Increase in 2020 vs. 2019 (%)	Base Salary Increase in 2019 vs. 2018 (%)
Tony J. Hunt	725,000	685,000	600,000	6	14
Jon K. Snodgres	393,594	371,315	360,500	6	3
Ralf Kuriyel	346,080	336,000	320,000	3	5

(1) The compensation report prepared by Meridian showed that the 2020 and 2019 base salaries of these named executive officers are competitive with the 50th percentile among the Company's 2019 peer group as disclosed above. These base salary increases were based on each named executive officer's performance, qualifications, experience, responsibilities and Meridian's survey of the publicly disclosed compensation for similar positions at companies in the peer group.

Annual Cash Incentive Compensation Plan

The Company's executive officers, other than the Chief Executive Officer are eligible to receive annual cash incentive compensation based on both corporate performance as measured against the Company goals set forth below (the "Company Objectives") and other corporate performance objectives tied to individual results for their functional areas, pursuant to the Annual Cash Incentive Compensation Plan (the "Plan"). As the Company's current President and Chief Executive Officer, Mr. Hunt is responsible for developing company strategy and overseeing all of the Company's corporate functions, product development and commercial activities. Because of his role and responsibilities, Mr. Hunt's incentive payout is calculated based solely on Company Objectives to closely align his compensation with the Company's performance. The annual cash incentive compensation earned by each executive officer is determined by the Compensation Committee after the end of each fiscal year and is calculated as a percentage of the executive officer's target annual cash incentive compensation.

The Company establishes the target amount of its annual cash incentive compensation at a level that represents a meaningful portion of the executive officers' cash compensation and sets a threshold performance level for each executive. In establishing these levels, in addition to considering the incentives that the Company wants to provide to the executive officers, it also considers the annual cash incentive compensation levels for comparable positions within our peer group and our own historical practices.

The overall Company Objectives for the fiscal year ended December 31, 2019, (the "Performance Period"), related to revenue and earnings per share ("EPS"). See below for further detail regarding the Plan and the Company Objectives.

Plan Protocol

The Compensation Committee administers the Plan:

- 1. At the beginning of the fiscal year, the Chief Executive Officer, with assistance from senior management, proposes annual Company Objectives, other corporate performance objectives (for executives other than himself) tied to individual results, measurement criteria and weightings, subject to review and approval by the Compensation Committee.
- 2. At the beginning of the following fiscal year, the Chief Executive Officer evaluates performance levels and the achievement of these annual Company Objectives and other corporate performance objectives tied to individual results for all executive officers except for himself, which are subject to review and approval by the Compensation Committee. Specific bonus award recommendations for all participants (except the Chief Executive Officer) are submitted by the Chief Executive Officer to the Compensation Committee for review.
- 3. The Compensation Committee determines the size of the overall bonus pool and the bonus awards for individual participants based on the target bonus figures, the Company's performance against the Company Objectives and, in the case of executive officers other than the Chief Executive Officer, performance against other corporate business objectives tied to individual results.

Plan Payout

Generally, the Company must attain a minimum of 60% overall achievement of its Company Objectives for any payment to be made pursuant to the Plan, and the Compensation Committee may, at its discretion, elect to adjust bonuses downwards or not to pay bonuses at all. A target bonus (as a percentage of base salary) and the weight assigned to corporate and individual results are determined for participants based upon their position. The final incentive payout is determined for each participant based on the achievement of Company Objectives and other corporate performance objectives tied to individual results (other than for the Chief Executive Officer, whose annual cash incentive award is determined based solely on Company Objectives) defined for each organizational level and position and the target incentive percentage.

For the fiscal year ended December 31, 2019, the Company established a target annual cash incentive award and a weighting for Company Objectives and other corporate objectives tied to individual results for each of the named executive officers, depending on their role, experience and objectives, which are set forth below.

Individual Annual Cash Incentive Targets (1)

Name	Bonus Target as % of Salary for the Fiscal Year Ended December 31, 2019	Portion Tied to Company Objectives	Position Tied to Other Corporate Objectives Tied to Individual Results
Tony J. Hunt	90%	100%	0%
Jon K. Snodgres	50%	60%	40%
Ralf Kuriyel	50%	60%	40%

(1) Each named executive officer's target cash incentive amount is determined using the following formula:

(Base Salary x Bonus Target %) x (Corporate Objectives % + Performance Objectives Tied to Individual Results %) = Cash Incentive Target

Performance Criteria

The cash incentive compensation of executive officers is based on the achievement of Company Objectives, as a whole, and, for executive officers other than the Chief Executive Officer, on the achievement of other corporate performance objectives tied to individual results. Criteria and specific goals within each category are as follows:

Company Performance

Achievement of the Company Objectives.

Other Corporate Objectives Tied to Individual Results

- An executive officer's involvement in and responsibility for the attainment of key financial, product development, product
 manufacturing and quality, sales and marketing, business collaboration and corporate development and other strategic objectives
 of the Company;
- The involvement of an executive officer in personnel recruitment, retention and morale; and
- The responsibility of the executive officer in working within budgets, controlling costs and other aspects of expense management.

Achievement of Company Objectives

The Company Objectives are tied to revenue and adjusted EPS and the target levels for the Company Objectives were determined at the beginning of the 2019 fiscal year. The calculation of adjusted EPS and EPS can be found in the Management Discussion and Analysis of Financial Condition and Results of Operations section of our Form 10-K for the year ended December 31, 2019. In 2019, the Compensation Committee implemented multipliers that could increase or decrease the actual bonuses paid in a non-linear manner based upon the degree to which the Company achieves or fails to achieve its revenue and adjusted EPS targets.

The following is a summary of the Company Objectives for the fiscal year ended December 31, 2019:

Com	pany Objectives for the Fiscal Year Ended December 31, 2019
Reve	nue
	Achieve \$225 million in sales revenue
Earn	ings Per Share
	Achieve \$0.85 of adjusted EPS (fully diluted)

The Compensation Committee reviewed our achievement of the Company Objectives and determined that we achieved 135% of the Company Objectives. The Compensation Committee made this determination in light of the consolidated revenue of \$270.2 million and adjusted EPS of \$1.07 for 2019.

Achievement of Other Corporate Objectives Tied to Individual Results

In addition to the Company Objectives, executive officers, with the exception of Mr. Hunt, also have a component to their annual cash incentive compensation determined based upon achievement of other corporate objectives tied to individual results. Our Chief Executive Officer evaluated the actual performance of the other executive officers against the goals and submitted such evaluation to the Compensation Committee. The ultimate determination of achievement of the other corporate performance objectives tied to individual results is at the sole discretion of the Compensation Committee. The performance assessment for the other corporate objectives tied to individual results is not calculated on a line item basis, but rather represents an overall assessment as to how the executive officer contributed to the success of the Company through and within his or her area of responsibility. The individual objectives are designed to be difficult to achieve at 100%. The Compensation Committee has assessed the attainment of these objectives by Mr. Snodgres and Mr. Kuriyel for 2019.

As the Company's Chief Financial Officer, Mr. Snodgres is responsible for the Company's internal systems, financial controls, and information technology. Specifically, Mr. Snodgres' other corporate objectives tied to individual results for 2019 included scaling the Company's global financial organization, the development and successful completion of Phase 1 of the SAP ERP system implementation, an upgrade of information security systems and programs, the execution on capital structure initiatives, the closure and integration of the strategic acquisition of C Technologies, continued improvements in the Company's financial closing and internal controls processes as well as the continued expansion of both management and external reporting capabilities to enhance business

decision making and improve transparency of financial performance. The overall evaluation of achievement of these factors involves both quantitative and qualitative analysis. The Chief Executive Officer evaluated Mr. Snodgres' actual performance against his individual objectives, in light of his contributions detailed above, and submitted such evaluation to the Compensation Committee, which determined that the aggregate achievement of the individual objectives for Mr. Snodgres was 150%.

Mr. Kuriyel, the Company's Senior Vice President of Research and Development, is responsible for leading and overseeing the Company's research and development and partnering activities to enhance our portfolio of products and services. Mr. Kuriyel's other corporate objectives tied to individual results for 2019 included, among other things, developing and launching new products, including TFDF technology, leading key technical collaborations with external partners, in particular Navigo GmbH and Purolite Life Sciences, developing and expanding our intellectual property for our product portfolio and driving new applications for our products in perfusion and harvest clarification. The overall evaluation of achievement of these factors involves both quantitative and qualitative analysis. The Chief Executive Officer evaluated Mr. Kuriyel's actual performance against his individual objectives, in light of his contributions detailed above, and submitted such evaluation to the Compensation Committee, which determined that the aggregate achievement of the individual objectives for Mr. Kuriyel was 135%.

Annual Bonus Incentive Payments under the Plan

Annual bonus incentive payments under the Plan for the fiscal year ended December 31, 2019 are as follows:

Bonus Target as % of Salary for the Fiscal Year Ended December 31, 2019 (%)	Objectives Tied to Individual Results (%) (1)	2019 Corporate Goals Achievement (%) (11)	2019 Bonus Payout (\$) ⁽²⁾	2019 Overall Achievement (%) ⁽³⁾
90	N/A	135	832,275	135
50	150	135	261,777	141
50	135	135	226,800	135
	for the Fiscal Year Ended December 31, 2019 (%) 90	for the Fiscal Year Ended December 31, 2019 (%) (%) (%) (1) 90 N/A 50 150	for the Fiscal Objectives 2019 Year Ended Tied to Corporate December 31, Individual Goals 2019 Results Achievement (%) (%) (1) (%) (1) 90 N/A 135 50 150 135	for the Fiscal Year Ended Pecember 31, 2019 Objectives Tied to Individual Results (%) 2019 Results (%) 2019 Bonus Payout (\$) 90 N/A 135 832,275 50 150 135 261,7777

- (1) Mr. Hunt's annual bonus incentive payment is calculated based 100% on Company Objectives to closely align his compensation with the Company's performance. The bonus incentive payments made to Messrs. Snodgres and Kuriyel are calculated based on 40% individual performance and 60% corporate performance.
- (2) 2019 Bonus was paid out in March 2020.
- (3) Overall achievement percentage is based on target bonus.

Objectives for the Fiscal Year Ending December 31, 2020

Our annual cash incentive compensation program for the fiscal year ending December 31, 2020 are generally consistent with the Company's programs for the fiscal year ended December 31, 2019. The Company will continue to solely rely upon revenue and adjusted EPS metrics to determine 100% of Mr. Hunt's 2020 annual bonus. The other corporate performance objectives considered by the Compensation Committee in determining the cash incentive for executive officers, other than Mr. Hunt, for 2020 are as follows:

- Financial Performance achieve sales targets, meet gross margin, profit and EPS targets, and implement the new ERP software system, SAP, in Rancho Dominguez, California, Breda, The Netherlands and Japan.
- Product Development complete launches of next generation ATF controllers, launch the next-generation FlowVPE System and continue to develop next-generation filtration and chromatography consumables and systems.
- Manufacturing and Quality improve production throughput, continue to focus on quality and business continuity for customers, complete OPUS expansions in Waltham, Massachusetts and Breda, The Netherlands, increase manufacturing capacity in systems, improve overall quality and support SAP implementation.
- Sales and Marketing expand field applications and field service presence in North America, Europe and Asia, execute on C
 Technologies plan and on gene therapy marketing program, support launch of new products and drive product adoption for TFDF
 and next-generation products.
- Business and Corporate Development evaluate and execute on new product and acquisition targets.

Equity Incentive Compensation

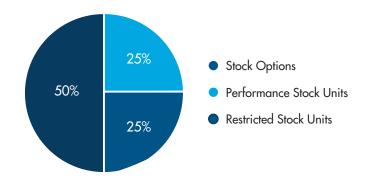
The Compensation Committee believes that equity incentives in the form of stock options and restricted stock units subject to vesting over time and restricted stock units subject to performance-based vesting criteria are an effective vehicle for long-term compensation. Equity incentives align individual and team performance with the achievement of the Company's strategic and financial goals, long-term value creation, and shareholders' interests. Performance-based restricted stock units reward executive officers only if the Company meets certain specified financial and/or operational metrics. Stock options reward executive officers only if the stock price increases from the date of grant over time. Restricted stock units are impacted by all stock price changes, so the value to the executive officers is affected by both increases and decreases in stock price from the market price at the date of grant.

In the fiscal year ended December 31, 2019, the Compensation Committee considered a number of factors in determining what, if any, equity incentive compensation to grant to the executive officers, including:

- the performance of the Company during the fiscal year;
- the number of shares subject to, and exercise price of, outstanding options, both vested and unvested, held by the executive officers;
- the number of restricted stock units held by the executive officers;
- the vesting schedule of the unvested equity awards held by the executive officers;
- the financial statement impact of any equity award;
- the amount and percentage of the total equity on a diluted basis held by the executive officers; and
- the available shares under the Company's equity incentive plan.

As shown in the graph below, the long-term equity incentive compensation awards made to our NEOs in 2019 and 2020 are split, based upon dollar value, between performance-based restricted stock units (25%), stock options subject to time-based vesting (25%) and restricted stock units subject to time-based vesting (50%). We granted our named executive officers performance-based equity awards in 2019 and 2020 and we anticipate that we will continue to include performance-based equity awards as part of our long-term incentive compensation program going forward for the reasons noted above.

All awards are subject to 3-year vesting schedules. Performance-based restricted stock unit awards vest only if we achieve 3-year return on invested capital and average revenue growth goals.



In February 2019, the Compensation Committee granted the following long-term incentive compensation awards to each of the named executive officers of the Company. These awards are split based upon dollar value between performance-based restricted stock units (25%), stock options subject to time-based vesting (25%) and restricted stock units subject to time-based vesting (50%).

Name	Number of Shares Underlying Stock Options (#)	Restricted Stock Units (#)	Performance Stock Units (#)
Tony J. Hunt	21,756	22,681	15,037
Jon K. Snodgres	5,681	5,922	2,961
Ralf Kuriyel	4,061	4,234	2,117

Additionally, in May 2019, Messrs. Snodgres and Kuriyel each received a discretionary grant of 8,000 restricted stock units that vest over five years, subject to continued employment. These discretionary grants were awarded in recognition of execution on objectives related to the integration of the Spectrum acquisition through April 2019.

Time-based equity awards granted in 2019 vest in annual installments over three years following the grant date. Performance-based equity awards vest 50% based on the Company's Compound Annual Growth Rate ("CAGR") and 50% based on the Company's return on invested capital, in each case over the three-year performance period from January 1, 2019 to December 31, 2021. We have omitted the specific CAGR and return on invested capital targets because they involve confidential financial information the disclosure of which would result in competitive harm to the Company but we have set such goals at challenging levels and we believe that they are difficult to achieve and would require substantial and sustained performance in order to be achieved at target levels. Linear interpolation shall be applied to determine the percentage of performance-based restricted stock units that vest and are earned where performance falls between the threshold, target and maximum goals amounts set forth above. In order for any portion of the performance-based restricted stock units to be earned and vest, threshold performance must be achieved with respect to the relevant goal (CAGR or return on invested capital) and no more than 200% of the target award can be earned.

2020 Long-term Equity Incentive Compensation

In February 2020, the Compensation Committee granted long-term incentive compensation awards to each of the named executive officers of the Company. Consistent with the Company's increased emphasis on performance-based incentives, as described above, these awards are split based upon dollar value between performance-based restricted stock units (25%), stock options subject to time-based vesting (25%) and restricted stock units subject to time-based vesting (50%), all of which are subject to vesting over three years. The performance-based restricted stock units vest only if the Company achieves specified return on invested capital and CAGR targets over the three-year performance period.

Clawback Policy

In February 2019, the Compensation Committee adopted a clawback policy that covers cash and equity incentive compensation paid to the Company's executive officers. The policy provides that if the Company is required to prepare an accounting restatement due to the Company's material non-compliance with any financial reporting requirement and/or intentional misconduct by a covered executive officer, the Compensation Committee may require the covered executive officer to repay to us any excess compensation received by the covered executive officer during the three fiscal years preceding the publication of any such restated financial statements. For purposes of this policy, excess compensation means annual cash bonus and long-term equity incentive compensation that is in excess of the amount such covered executive officer would have received, if the annual cash bonus and/or long-term equity incentive compensation had been determined based on the financial results reported in the restated financial statement. Under the 401(k) plan, the Company matches 50% of the first 6% of eligible compensation contributed by employees subject to a maximum of \$5,000 per year.

Other Compensation

All full-time employees, including the executive officers, are eligible to participate in the health and welfare benefit programs, including medical, dental and vision care coverage, disability and life insurance and the Company's 401(k) plan. Under the 401(k) plan, the Company matches 50% of the first 6% of eligible compensation contributed by employees subject to a maximum of \$5,000 per year.

Tax and Accounting Considerations

We have not provided or agreed to provide any of the Company's executive officers or directors with a gross-up or other reimbursement for tax amounts they might pay pursuant to Section 4999 or Section 409A of the Code. Sections 280G and 4999 of the Code provide that executive officers, directors who hold significant shareholder interests and certain other service providers could be subject to significant additional taxes if they receive payments or benefits in connection with a change in control of the Company that exceed certain limits, and that we or our successor could lose a deduction on the amounts subject to the additional tax. Section 409A also imposes additional significant taxes on the individual in the event that an employee, director or service provider receives "deferred compensation" that is not exempt from or does not meet the requirements of Section 409A.

For the Company's financial statements, cash compensation, such as salary and bonus, is expensed and for income tax returns, cash compensation is generally deductible except as set forth below. For equity-based compensation, we expense the fair value of such grants over the requisite service period.

Generally, Section 162(m) of the Code disallows a federal income tax deduction for public corporations of remuneration in excess of \$1 million paid for any fiscal year to a "covered employee" of the Company. With respect to taxable years beginning before January 1, 2018, remuneration in excess of \$1 million was exempt from this deduction limit if it qualified as "performance-based compensation" within the meaning of Section 162(m).

Pursuant to the Tax Cuts and Jobs Act of 2017, effective for taxable years beginning after December 31, 2017, Section 162(m) was amended to: (1) expand the scope of individuals who are "covered employees," including anyone who was a covered employee in any prior taxable year beginning after December 31, 2016, (2) expand the types of companies what are subject to the limitations of Section 162(m), and (3) eliminate the exception for performance-based compensation and commissions. Transition relief provided that any payment made pursuant to a written and binding agreement that was in effect as of November 2, 2017 and subsequently materially modified, would be subject to the limitations of Section 162(m) as in effect prior to the amendment. Accordingly, compensation paid to our covered employees in excess of \$1 million will not be deductible unless it qualifies for the transition relief applicable to certain arrangements in place as of November 2, 2017, as described above. Furthermore, because of the uncertainties as to the application and interpretation of Section 162(m) as revised by the Tax Cuts and Jobs Act of 2017, including the uncertain scope of the transition relief, no assurance can be given that previously granted compensation intended to satisfy the requirements for performance-based compensation will, in fact, qualify for such exception.

The Compensation Committee believes that shareholder interests are best served if the Committee retains maximum flexibility to design executive compensation programs that meet stated business objectives. For these reasons, the Compensation Committee, while considering tax deductibility as a factor in determining executive compensation, may not limit such compensation to those levels that will be deductible, particularly in light of the elimination of the expansion of the covered employee group and the elimination of the exception for performance-based compensation.

Compensation Risk Assessment

The Compensation Committee considers and evaluates risks related to the Company's cash and equity-based compensation programs and practices as well as evaluates whether the Company's compensation plans encourage participants to take excessive risks that are reasonably likely to have a material adverse effect on the Company. Consistent with SEC disclosure requirements, the Compensation Committee has worked with management to assess compensation policies and practices for Company employees and has concluded that such policies and practices do not create risks that are reasonably likely to have a material adverse effect on the Company.

Executive Compensation Tables

Compensation Earned

The following table summarizes the compensation earned during the fiscal years ended December 31, 2019, 2018 and 2017 by the Company's principal executive officer, principal financial officer, other most highly compensated executive officer who was serving as an executive officer as of December 31, 2019 and whose total compensation exceeded \$100,000. These individuals are referred to as named executive officers.

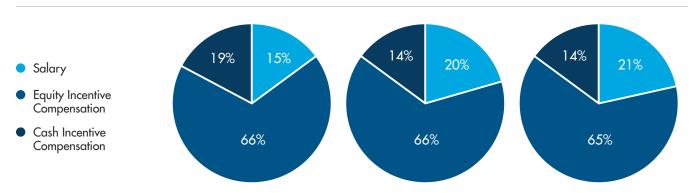
2019 Summary Compensation Table

Name	Year	Salary (\$)	Stock Options (\$) (1)	Option Awards (\$) (1)	Non-Equity Incentive Plan Compensation (\$) (2)	All Other Compensation (\$) (3)	Total (\$)
Tony J. Hunt	2019	685,000	2,244,975	657,310	832,275	5,000	4,424,560
President and Chief Executive Officer	2018	600,000	6,299,989	6,608,337	380,000	5,000	13,893,326 (4)
Officer	2017	550,000	1,052,611	1,069,226	453,750	5,000	3,130,587
Jon K. Snodgres	2019	371,315	1,066,876	171,639	261,777	5,000	1,876,607
Chief Financial Officer	2018	360,500	523,732	355,961	62,250	5,000	1,307,443
	2017	350,097	319,950	298,922	276,883 (5)	5,000	1,250,852
Ralf Kuriyel	2019	336,000	916,172	122,694	226,800	5,000	1,606,666
Senior Vice President of	2018	320,000	386,998	221,410	179,200	5,000	1,112,608
Research and Development	2017	280,000	58,881	_	200,460 (5)	5,000	544,341

- (1) Represents the aggregate grant date fair value for awards granted in the respective fiscal years calculated in accordance with the Financial Accounting Standards Board Accounting Standards Codification No. 718, "Compensation Stock Compensation (Topic 718)" ("ASC Topic 718"). The assumptions the Company used for calculating the grant date fair values are set forth in Note 2, "Summary of Significant Accounting Policies Stock Based Compensation" to the Company's consolidated financial statements included in the Company's Form 10-K for the fiscal year ended December 31, 2019. The values reported for the performance-based restricted stock units granted to Messrs. Hunt, Snodgres and Kuriyel in 2019 represent the grant date fair values of awards assuming the probable outcome of the performance conditions. The value of such awards assuming the maximum achievement of the performance conditions is \$895,002 for Mr. Hunt, \$176,239 for Mr. Snodgres and \$126,004 for Mr. Kuriyel.
- (2) Amounts listed represent payments made with respect to the year indicated under the Company's Annual Cash Incentive Compensation Plan, as described above.
- (3) Represents the match paid by the Company on behalf of such individual into the Repligen Corporation 401(k) Savings Plan on 50% of the first 6% of eligible compensation contributed by such individual subject to a maximum of \$5,000 per year for the years ended December 31, 2019, 2018 and 2017.
- (4) Includes the grant date fair value of Mr. Hunt's one-time special long-term equity award granted in 2018 which vests over nine years.
- (5) Includes two grants during 2018 of special cash incentives based upon achievement of individual and corporate performance goals related to the integration of Spectrum as of December 31, 2017. In March 2018, Mr. Snodgres received \$34,333 and Mr. Kuriyel received \$34,000 and in October 2018, Mr. Snodgres received \$46,550 and Mr. Kuriyel received \$45,500.

The following graphs reflect the allocation of salary, equity incentive compensation, cash incentive compensation, and other compensation earned by the Company's named executive officers in the fiscal year 2019 as set forth in the 2019 Summary Compensation Table above.

2019 Summary Compensation Allocations



Named Executive Officer	Tony J. Hunt	Jon K. Snodgres	Ralf Kuriyel		
Title	President and CEO	Chief Financial Officer	Senior VP of R&D		
Total 2019 Compensation	\$4,424,560	\$1,876,607	\$1,606,666		

Grants of Plan-Based Awards for the Fiscal Year Ended December 31, 2019

The table below sets forth grants of plan-based awards that were made in the fiscal year ended December 31, 2019 to the Company's named executive officers.

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards: Threshold (\$) [1]	Estimated Future Payouts Under Non-Equity Incentive Plan Awards: Target (\$) [2]	Estimated Future Payouts Under Equity Incentive Plan Awards: Target (#) [3]	Stock Awards: Number of Shares of Stock or Units (#)	All Other Awards: Number of Securities Underlying Options (#)	Exercise or Base Price of Option Awards (\$/Share)	Grant Date Fair Value of Stock and Option Awards (\$)
Tony J. Hunt		369,900	616,500	_			_	_
	2/28/2019	_	_	_	_	21,756	59.52	657,310
	2/28/2019	_	_	_	22,681	_	_	1,349,973
	2/28/2019	_	_	15,037	_	_	_	895,002
Jon K. Snodgres	_	141,100	185,658	_	_	_	_	_
	2/28/2019	_	_	_	_	5,681	59.92	171,639
	2/28/2019	_	_	_	5,922	_	_	352,477
	2/28/2019	_	_	2,961	_	_	_	176,239
	5/13/2019	_	_	_	8,000	_	_	538,160
Ralf Kuriyel	_	127,680	168,000	_	_	_	_	_
	2/28/2019	_	_	_	_	4,061	59.92	122,694
	2/28/2019	_	_	_	4,234	_	_	252,008
	2/28/2019	_	_	2,117	_	_	_	126,004
	5/13/2019	_	_	_	8,000	_	_	538,160

- (1) The amounts represent the threshold bonus, assuming achievement of 60% of the Company Objectives for Mr. Hunt and 60% of the Company Objectives and other corporate goals and 100% achievement of the individual goals for Mr. Snodgres and Mr. Kuriyel.
- (2) The amounts represent the target bonus, assuming achievement of 100% of the Company Objectives for Mr. Hunt and 100% of the Company Objectives and other corporate goals and 100% achievement of the individual goals for Mr. Snodgres and Mr. Kuriyel. The actual bonus awarded by the Compensation Committee can be higher or lower than the target depending on achievement of corporate and individual goals. The actual amounts awarded for 2019 performance are listed in the Non-Equity Incentive Plan Compensation column of the Summary Compensation Table.
- (3) In February 2019, Messrs. Hunt, Snodgres and Kuriyel were granted restricted stock units that vest upon the Company's achievement of specified return on invested capital and average revenue growth targets over the three-year period.

Discussion of Summary Compensation Table and Grants of Plan-Based Awards Table

The Company's executive compensation policies and practices, pursuant to which the compensation set forth in the Summary Compensation Table and the Grants of Plan-Based Awards Table was paid or awarded, are described above under "Compensation Discussion and Analysis." The material terms of employment agreements and arrangements with the Company's named executive officers are described below under the heading "Employment Arrangements."

Outstanding Equity Awards at December 31, 2019

The following table sets forth certain information regarding the outstanding stock option grants and stock awards held by the named executive officers at December 31, 2019. Awards were made under the 2018 Stock Option and Incentive Plan (the "2018 Plan") and the Amended and Restated 2012 Repligen Corporation Stock Option and Incentive Plan (the "2012 Stock Option Plan"), as amended. For the outstanding stock option grants and stock awards described below, vesting is conditioned on the named executive officer remaining in service to the Company through such vesting date. Such awards may also be subject to accelerated vesting as described in "Potential Payments Upon Termination or a Change in Control".

Name	Grant Date	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock that Have Not Vested (#)	Market Value of Shares or Units of Stock that Have Not Vested (\$) (1)	Equity Incentive Plan Awards: Number of Unearned Shares, Other Rights that Have Not Vested (#)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights that Have Not Vested (\$) (1)
Tony J. Hunt	5/5/2014	18,127	_	16.55	5/5/2024	_	_	_	_
	2/26/2015	39,037	_	26.20	2/26/2025	_	_	_	_
	2/23/2016	65,351	_	26.05	2/26/2026	_	_	_	_
	2/23/2017	43,316	21,659 (2)	32.40	2/23/2027	_	_	_	_
	2/23/2017	_	_	_	_	10,830 (3)	1,001,775	_	_
	3/1/2018	31,729	253,834 (4)	33.87	2/29/2028	_	_	_	_
	3/1/2018	24,748	49,497 (5)	33.87	2/29/2028	_	_	_	_
	3/1/2018	_	_	_	_	131,221 (6)	12,137,943	_	_
	3/1/2018	_	_	_	_	25,588 [7]	2,366,890	_	_
	2/28/2019	_	21,756 (8)	59.52	2/28/2029	_	_	_	_
	2/28/2019	_	_	_	_	22,681 (9)	2,097,993	_	_
	2/28/2019	_	_	_	_	_	_	15,037 (10)	1,390,923
Jon K. Snodgres	2/26/2016	3,170	_	26.05	2/26/2026	_	_	_	_
	2/23/2017	_	6,055 (11)	32.40	2/23/2027	_	_	_	_
	2/23/2017	_	_	_	_	3,292 (12)	304,510	_	_
	3/1/2018	6,886	13,773 (13)	33.87	2/29/2028	_	_	_	_
	3/1/2018	_	_	_	_	7,120 (14)	658,600	_	_
	2/28/2019	_	5,681 (15)	59.52	2/28/2029	_	_	_	_
	2/28/2019	_	_	_	_	5,922 (16)	547,785	_	_
	2/28/2019	_	_	_	_	_	_	2,961 (17)	273,893
	5/13/2019	_	_	_	_	8,000 (18)	740,000	_	_
Ralf Kuriyel	12/14/2016	6,000	4,000 (19)	33.05	12/14/2026	-	_	-	_
	12/14/2016	_	_	_	_	2,000 (20)	185,000	_	_
	5/12/2017	_	_	_	_	506 (21)	46,805	_	_
	3/1/2018	4,283	8,567 (22)	33.87	2/29/2028	_	_	_	_
	3/1/2018	_	_	_	_	4,429 (23)	409,683	_	_
	2/28/2019	_	4,061 (24)	59.52	2/28/2029	_	_	_	_
	2/28/2019	_	_	_	_	4,234 (25)	391,645	_	_
	2/28/2019	_	_	_	_	_	_	2,117 (26)	195,823
	5/13/2019	_	_	_	_	8,000 (27)	740,000	_	_

⁽¹⁾ The value of equity awards is based on the closing of the Company's stock on the Nasdaq Global Market on December 31, 2019, the last trading day of 2019, which was \$92.50.

^{(2) 21,659} shares vest on February 23, 2020.

^{(3) 10,830} shares vest on February 23, 2020.

- (4) 31,729 shares vest annually from March 1, 2020 to March 1, 2022 and annually from March 1, 2024 to March 1, 2026. 31,730 shares vest on March 1, 2023 and March 1, 2027.
- (5) 24,749 shares vest on March 1, 2020 and March 1, 2021.
- (6) 16,402 shares vest on March 1, 2021, March 1, 2023 and March 1, 2025. 16,403 shares vest on March 1, 2020, March 1, 2022, March 1, 2024, March 1, 2026 and March 1, 2027.
- (7) 12,794 shares vest on March 1, 2020 and March 1, 2021.
- (8) 7,252 shares vest on February 28, 2020, February 28, 2021 and February 28, 2022.
- (9) 7,560 shares vest on February 28, 2020 and February 28, 2021. 7,561 shares vest on February 28, 2022.
- (10) 15,037 shares vest on February 28, 2022 assuming the Company achieves specified CAGR and return on invested capital goals over the three-year period as specified by the Compensation Committee as described under "Compensation Discussion and Analysis Equity Incentive Compensation."
- (11) 6,055 shares vest on February 23, 2020.
- (12) 3,292 shares vest on February 23, 2020.
- (13) 6,886 shares vest on March 1, 2020. 6,887 shares vest on March 1, 2021.
- (14) 3,560 shares vest on March 1, 2020 and March 1, 2021.
- (15) 1,893 shares vest on February 28,2020. 1,894 shares vest on February 28, 2021 and February 28, 2022.
- (16) 1,974 shares vest on February 28, 2020, February 28, 2021 and February 28, 2022.
- (17) 2,961 shares vest on February 28, 2022 assuming the Company achieves specified CAGR and return on invested capital goals over the three-year period as specified by the Compensation Committee as described under "Compensation Discussion and Analysis Equity Incentive Compensation."
- (18) 1,600 shares vest annually from May 13, 2020 to May 13, 2024.
- (19) 2,000 shares vest on December 14, 2020 and December 14, 2021.
- (20) 1,000 shares vest on December 14, 2020 and December 14, 2021.
- (21) 506 shares vest on May 12, 2020.
- (22) 4,283 shares vest on March 1, 2020. 4,284 shares vest on March 1, 2021.
- (23) 2,214 shares vest on March 1, 2020. 2,215 shares vest on March 1, 2021.
- (24) 1,354 shares vest annually on February 28,2020 to February 28, 2022.
- (25) 1,411 shares vest on February 28, 2020 and February 28, 2021. 1,412 shares vest on February 28, 2022.
- (26) 2,117 shares vest on February 28, 2022 assuming the Company achieves specified CAGR and return on invested capital goals over the three-year period as specified by the Compensation Committee as described under "Compensation Discussion and Analysis Equity Incentive Compensation."
- (27) 1,600 shares vest annually from May 13, 2020 to May 13, 2024.

Option Exercises and Stock Vested for the Fiscal Year Ended December 31, 2019

The following table sets forth certain information regarding the number of stock options exercised, restricted stock units that vested and amounts realized by the named executive officers in the year ended December 31, 2019.

	Option A	wards	Stock Awards		
Name	Number of Shares Acquired on Exercise (#)	Value Realized Exercise (\$) (1)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (#) (2)	
Tony J. Hunt	20,000	1,309,800	56,221	3,387,245	
Jon K. Snodgres	3,957	250,650	15,187	929,069	
Ralf Kuriyel	_	_	8,419	529,856	

- (1) The value realized on exercise of an option award is based on the difference between the fair market value of Common Stock on the date of exercise and the exercise price of the option.
- (2) The value realized on vesting of restricted stock units is based on the closing price of Common Stock on the trading date immediately preceding the date of vesting.

Pension Benefits

The Company has no defined benefit plans or other supplemental retirement plans for the named executive officers.

Nonqualified Deferred Compensation

The Company has no nonqualified defined contribution plans or other nonqualified deferred compensation plans for the named executive officers.

Employment Arrangements

Second Amended and Restated Employment Agreement with Mr. Hunt

On June 15, 2019, the Company entered into a Second Amended and Restated Employment Agreement (the "Employment Agreement") with Mr. Hunt. Pursuant to the terms of the Employment Agreement, in the event that Mr. Hunt's employment is terminated by the Company without cause or he resigns for good reason, each as defined in the Employment Agreement, subject to the execution and effectiveness of a separation agreement containing, among other things, a general release of claims in favor of the Company, Mr. Hunt will be entitled to receive (i) continued payment of his base salary at the rate then in effect for 12 months following termination, (ii) acceleration of 50% of his unvested stock options and other unvested stock-based awards with time-based vesting, with the exception of the special award granted to him in 2018, (iii) a pro-rata portion of his stock options and other stock-based awards that are subject to performance-based vesting and for which achievement of the performance metrics has not been determined as of the date of termination shall remain eligible to vest at the end of the performance period based on actual performance through the end of the performance period and (iv) if Mr. Hunt is enrolled in the Company's group health care programs immediately prior to the date of termination and properly elects to receive COBRA benefits, payment of the COBRA premiums by the Company for up to 12 months following termination. The special award granted in 2018 is not subject to acceleration upon a termination of Mr. Hunt's employment with the Company. Pro-ration for purposes of item (iii) of the preceding sentence shall be determined based on the number of full months in the vesting period or performance period, as applicable, through the date of termination relative to the total number of full months in the vesting period or performance period, as applicable.

In the event of a change in control (as defined in the Employment Agreement) of the Company, any then unvested portion of the special award granted to Mr. Hunt in 2018, shall vest as of immediately prior to such change in control.

If Mr. Hunt's employment is terminated by the Company without cause or he resigns for good reason, in each case within 24 months following a change in control of the Company, subject to the execution and effectiveness of a separation agreement containing, among other things, a general release of claims in favor of the Company, Mr. Hunt will be entitled to receive (i) a lump sum amount in cash equal to two times the sum of his base salary at the rate then in effect (or at the rate in effect immediately prior to the change in control, if higher) and his target annual performance bonus for the year in which the date of termination occurs, (iii) a pro-rata portion of his target bonus for the year in which the date of termination occurs, (iii) accelerated vesting of 100% of his unvested stock options and other unvested stock-based awards with time-based vesting, other than the special award, (iv) accelerated vesting of a pro-rata portion of all of his stock options and other stock-based awards that are subject to performance-based vesting and for which achievement of the performance metrics has not been determined as of the date of termination assuming target performance through the end of the performance period and (v) if Mr. Hunt is enrolled in the Company's group health care programs immediately prior to the date of termination and properly elects to receive COBRA benefits, payment of the COBRA premiums by the Company for up to 18 months following termination.

Named Executive Officer Severance and Change in Control Plan

On June 13, 2019, the Company entered into a Named Executive Officer Severance and Change in Control Plan (the "Severance Plan"). Pursuant to the terms of the Severance Plan, in the event that Mr. Snodgres' or Kuriyel's employment is terminated by the Company without cause or one resigns for good reason, each as defined in the Severance Plan, subject to the execution and effectiveness of a separation agreement containing, among other things, a general release of claims in favor of the Company, that named executive officer will be entitled to receive (i) continued payment of base salary at the rate then in effect for 12 months following termination; provided, however, such amount shall be reduced by an amount equal to the dollar value of the portion of the monthly premiums paid by active employees for coverage under the Company's group health care programs multiplied by 12, (ii) except as otherwise provided in the applicable equity award agreement, accelerated vesting of 50% of unvested stock options subject to time-based vesting, (iii) accelerated vesting of a pro-rata portion of unvested stock-based awards subject to time-based vesting and for which achievement of the performance metrics has not been determined as of the date of termination shall remain eligible to vest at the end of the performance period based on actual performance through the end of the performance period and (v) if the named executive officer

is enrolled in the Company's group health care programs immediately prior to the date of termination and properly elects to receive COBRA benefits, payment of the COBRA premiums by the Company for up to 12 months following termination. Pro-ration for purposes of items (iii) and (iv) of the preceding sentence shall be determined based on the number of full months elapsed in the vesting period or performance period, as applicable, through the date of termination relative to the total number of full months in the vesting period or performance period, as applicable.

If Mr. Snodgres' or Mr. Kuriyel's employment is terminated by the Company without cause or if either resigns for good reason, in either case within 24 months following a change in control of the Company, subject to the execution and effectiveness of a separation agreement containing, among other things, a general release of claims in favor of the Company, that named executive officer will be entitled to receive (i) a lump sum payment equal to one-and-a-half times the sum of the named executive officer's base salary at the rate then in effect (or the rate in effect immediately prior to the change in control, if higher) and his target annual performance bonus for the year the termination occurs, (iii) a pro-rata portion of the named executive officer's target bonus for the year in which the date of termination occurs, (iii) accelerated vesting of 100% of their unvested stock options and other unvested stock-based awards subject to time-based vesting, (iv) accelerated vesting of a pro-rata portion of all performance-based awards held by the named executive officer with performance deemed to be met at target levels and (v) if the named executive officer is enrolled in the Company's group health care programs immediately prior to the date of termination and properly elects to receive COBRA benefits, payment of the COBRA premiums by the Company for up to 18 months following termination. Pro-ration for purposes of items (ii) and (iv) of the preceding sentence shall be determined based on the number of full months elapsed in the performance period through the date of termination relative to the total number of full months in the performance period.

Potential Payments Upon Termination or Change in Control

The 2012 Stock Option Plan and the 2018 Plan (collectively referred to as "the Plans"), provide that upon the effectiveness of a "sale event," as defined in the Plans, except as otherwise provided by the Compensation Committee in the award agreement, all outstanding awards will automatically terminate, unless the parties to the sale event agree that such awards will be assumed or continued by the successor entity. The Compensation Committee subsequently determined that upon a "sale event," notwithstanding anything to the contrary in the applicable award agreement, the initial equity awards made to Messrs. Snodgres and Kuriyel in connection with their initial hiring will be immediately accelerated and become fully exercisable or nonforfeitable. In addition, in the case of a sale event in which the Company's shareholders receive cash consideration, the Company may make or provide for a cash payment to participants holding options equal to the difference between the per share cash consideration and the exercise price of the options and, under the 2018 Plan, make or provide for a payment, in cash or in kind, to the grantees holding other awards in an amount equal to the per share cash consideration multiplied by the number of vested shares underlying such awards.

Assuming the named executive officers' employment was terminated by the Company or the named executive officers resigned for good reason (other than within 24 months following a change in control) and such event took place on December 31, 2019, each of the named executive officers would have been entitled to the payments and benefits shown in the table below.

		Value of Payments and Benefits						
Name	Base Salary Continuation (\$)	Accelerated Vesting of Equity Awards (\$)(1)	Health Insurance Under COBRA (\$)	Total (\$)				
Tony J. Hunt	685,000	5,580,339	26,429	6,291,768				
Jon K. Snodgres	371,315	1,665,741	26,429	2,063,485				
Ralf Kuriyel	336,000	1,150,829	26,429	1,513,258				

(1) Based on the intrinsic value of the stock options on December 31, 2019, which is calculated using the \$92.50 market closing price of the Common Stock on December 31, 2019, the last trading day of 2019.

Assuming a change in control occurred on December 31, 2019, each of the named executive officers would have been entitled to the payments and benefits shown in the table below.

		Value of Payments and Benefits						
Name	Base Salary Continuation (\$)	Accelerated Vesting of Equity Awards (\$) (1)	Health Insurance Under COBRA (\$)	Total (\$)				
Tony J. Hunt	_	27,020,230	_	27,020,230				
Jon K. Snodgres	_	_	_	_				
Ralf Kuriyel	_	_	_	_				

(1) Based on the intrinsic value of the one-time special award granted to Mr. Hunt in 2018 on December 31, 2019, which is calculated using the \$92.50 market closing price of the Common Stock on December 31, 2019, the last trading day of 2019.

Assuming the named executive officer's employment was terminated by the Company or the named executive officers resigned for good reason within 24 months following a change in control and such event took place on December 31, 2019, each of the named executive officers would have been entitled to the payments and benefits shown in the table below.

		Value of Payments and Benefits						
Name	Base Salary and Target Bonus Payment (\$)	Pro-Rata Bonus Payout (\$)	Accelerated Vesting of Equity Awards (\$) (1)	Health Insurance Under COBRA (\$)	Total (\$)			
Tony J. Hunt	2,603,000	616,500	10,774,311	39,644	14,033,455			
Jon K. Snodgres	835,459	185,658	3,685,752	39,644	4,746,513			
Ralf Kuriyel	756,000	168,000	2,701,576	39,644	3,665,220			

(1) Based on the intrinsic value of the stock options on December 31, 2019 based upon market closing price of \$92.50 of the Common Stock on December 31, 2019, the last trading day of 2019.

CEO Pay Ratio

Pursuant to a mandate of the Dodd-Frank Act, the SEC adopted a rule requiring that we annually disclose the ratio of our median employee's total annual compensation to the total annual compensation of our Chief Executive Office, Tony J. Hunt, who is also our principal executive officer (the "CEO Pay Ratio").

The Company's compensation and benefits philosophy and the overall structure of the compensation and benefit programs are broadly similar across the organization and aim to encourage and reward all employees who contribute to the Company's success. The Company strives to ensure the pay of every employee reflects the level of his or her job impact and responsibilities and is competitive within the Company's peer group. Compensation rates are benchmarked and are generally set to be market-competitive in the country in which the jobs are performed. The Company's ongoing commitment to pay equity is critical to successfully supporting a diverse workforce with opportunities for all employees to grow, develop, and contribute.

We identified the median employee using total compensation as reported on Form W-2, subtracting bonuses earned in 2018 but paid in 2019, adding bonuses earned in 2019 but not paid until March 2020, and adding the fair value of equity awards granted to the employee during 2019. All individuals who were employed by the Company on December 31, 2019, the last day of the Company's fiscal year, were included in the determination of this calculation (including all employees, whether employed on a full-time, part-time, seasonal or temporary basis).

As illustrated in the table below, the Company's CEO Pay Ratio was approximately 39:1.

Tony J. Hunt (CEO) 2019 Compensation	\$ 4,424,560
Median Employee 2019 Compensation	\$ 112,637
CEO Pay Ratio to Median Employee Compensation	39:1

To determine the median employee, we included all individuals employed as of December 31, 2019. Compensation for the median employee was determined in the same manner as the total compensation reported for Mr. Hunt in the "Total" column of the Summary Compensation Table. The pay ratio reported above is a reasonable estimate calculated in a manner consistent with SEC rules, based on the Company's internal records and the methodology described above. The SEC rules for identifying the median compensated employee allow companies to adopt a variety of methodologies, to apply certain exclusions and to make reasonable estimates and assumptions that reflect their employee populations and compensation practices. Accordingly, the pay ratio reported by other peer companies may not be comparable to the pay ratio reported above, as other companies have different employee populations and compensation practices and may use different methodologies, exclusions, estimates and assumptions in calculating their own pay ratios.

Director Compensation

For the fiscal year ended December 31, 2019, non-employee directors received an annual cash retainer for service on the Board of Directors and committees as set forth in the table below.

	Awa	Award Retainer	
Board of Directors			
Each Non-Employee Member of the Board	\$	50,000	
Additional Retainer for the Chairperson	\$	90,000	
Audit Committee			
Committee Chairperson	\$	30,000	
Other Committee Members	\$	10,000	
Compensation Committee			
Committee Chairperson	\$	20,000	
Other Committee Members	\$	10,000	
Nominating and Corporate Governance Committee			
Committee Chairperson	\$	16,000	
Other Committee Members	\$	5,000	

Under the Company's Amended and Restated Director Compensation Policy, as amended in February 2016, each newly elected, non-employee director who joins the Board receives an option to purchase 24,000 shares of Common Stock on the date he or she joins the Board. These initial option grants vest in equal annual installments over a three-year period from the date of grant, provided such person is still a director on such vesting date. In addition, at each annual meeting, each non-employee director re-elected to the Board by the shareholders is awarded annual equity compensation. In 2019, all non-employee directors, other than the Chairperson, were entitled to annual equity compensation with a grant date fair value of \$125,000, and the Chairperson was entitled to annual equity compensation with a grant date fair value of \$175,000. The annual equity compensation award is 50% in the form of restricted stock units, and 50% in the form of stock options. Annual equity awards vest in full on the earlier of the first anniversary of the date of the grant or the next annual meeting of the shareholders, provided such person is still a director on such vesting date.

In February 2020, the Board, based upon the recommendation of the Compensation Committee, further amended its Amended and Restated Director Compensation Policy to increase the annual retainer and annual equity compensation for all directors, excluding the Chairperson, to \$55,000 and \$135,000, respectively. The Board also increased the annual retainer and annual equity compensation for the Chairperson of the Board to \$95,000 and \$185,000, respectively. Additionally, each newly elected, non-employee director who joins the Board shall now receive an option to purchase shares of Common Stock with an aggregate value of \$150,000 (versus the option to purchase 24,000 shares of Common Stock mentioned above) on the date he or she joins the Board. Lastly, in the event of a Sale Event (as defined in the 2018 Plan), the equity retainer awards granted to such non-employee directors shall become 100% vested and exercisable or nonforfeitable immediately prior to such Sale Event.

Director Compensation Table for the Fiscal Year Ended December 31, 2019

The following table sets forth a summary of the compensation the Company paid to its non-employee directors in the year ended December 31, 2019.

Name	Fees Earned or Paid in Cash (\$)	Stock Awards (\$) (1) (2) (3)	Option Awards (\$) (1) (2) (3)	Total (\$)
Nicolas M. Barthelemy	65,000	62,496	62,708	190,204
Glenn L. Cooper	70,000	62,496	62,708	195,204
John G. Cox	60,000	62,496	62,708	185,204
Karen A. Dawes	156,000	87,481	87,803	331,284
Glenn P. Muir	90,000	62,496	62,708	215,204
Thomas F. Ryan, Jr.	65,000	62,496	62,708	190,204

- (1) Represents the aggregate grant date fair value of awards granted in 2019 calculated in accordance with the ASC 718. The assumptions the Company used for calculating the grant date fair values are set forth in Note 2 to the Company's consolidated financial statements included in the Company's Form 10-K for the fiscal year ended December 31, 2019.
- (2) The non-employee directors of the Board who held such position on December 31, 2019 held the following aggregate number of unexercised stock options and unvested restricted stock units as of such date:

Name	Number of Securities Underlying Unexercised Options	Number of Unvested Restricted Stock Units
Nicolas M. Barthelemy	5,413	923
Glenn L. Cooper	51,901	923
John G. Cox	38,845	923
Karen A. Dawes	61,142	9,292
Glenn P. Muir	35,213	923
Thomas F. Ryan, Jr.	10,839	923

(3) The following table presents the grant date fair value of each grant of restricted stock units or stock options in the fiscal year ended December 31, 2019 to non-employee directors, computed in accordance with the ASC 718:

Name	Grant Date	Number of Fees Earned or Paid in Cash (#)	Number of Securities Stock Awards (#)	Exercise Base Price of Option Awards (\$)	Grant Date Fair Value of Stock and Option Awards (\$)
Nicolas M. Barthelemy	5/15/2019	_	2,109	67.71	62,708
	5/15/2019	923	_	_	62,496
Glenn L. Cooper	5/15/2019	_	2,109	67.71	62,708
	5/15/2019	923	_	_	62,496
John G. Cox	5/15/2019	_	2,109	67.71	62,708
	5/15/2019	923	_	_	62,496
Karen A. Dawes	5/15/2019	_	2,953	67.71	87,803
	5/15/2019	1,292	_	_	87,481
Glenn P. Muir	5/15/2019	_	2,109	67.71	62,708
	5/15/2019	923	_	_	62,496
Thomas F. Ryan, Jr.	5/15/2019	_	2,109	67.71	62,708
	5/15/2019	923	_	_	62,496

Compensation Committee Interlocks and Insider Participation

Dr. Cooper and Messrs. Barthelemy and Muir were the members of the Compensation Committee during the year ended December 31, 2019. No member of the Compensation Committee is a current or former employee of the Company or had any relationship with us requiring disclosure herein. No interlocking relationship exists between any member of the Board or the Compensation Committee and any member of the board or compensation committee of any other company and no such interlocking relationship has existed in the past.

GENERAL ANNUAL MEETING INFORMATION

This proxy statement is furnished in connection with the solicitation of proxies by the Board of Directors (the "Board of Directors", or the "Board") of Repligen Corporation ("Repligen", or the "Company"), for use at the Annual Meeting of Shareholders, to be held on Wednesday, May 13, 2020 (the "Annual Meeting") at 8:00 a.m. EDT, at www.virtualshareholdermeeting.com/RGEN2020, and at any adjournment or postponement thereof. The Annual Meeting will be held entirely online this year due to the emerging public health impact of the coronavirus outbreak (COVID-19).

Repligen's Annual Report to Shareholders, containing financial statements for the fiscal year ended December 31, 2019 (the "Annual Report"), is being provided together with this proxy statement to all shareholders entitled to vote at the Annual Meeting. It is anticipated that this proxy statement and the accompanying proxy card will be first sent or given to shareholders on or about April 29, 2020.

Record Date:	April 1, 2020 (the "Record Date"). Only shareholders of record as of the Record Date, are entitled to notice of and to vote at the Annual Meeting and any adjournments or postponements thereof.
Quorum:	The representation, in person or by proxy, of at least a majority of the outstanding shares of Repligen common stock with a par value of \$0.01 ("Common Stock") entitled to vote at the Annual Meeting is necessary to constitute a quorum for the transaction of business.
Voting Securities/Common Stock Outstanding:	As of the Record Date, the Company had 52,278,083 shares of Common Stock outstanding and entitled to vote. Each outstanding share of Common Stock entitles the record holder to one vote.
Voting Methods:	Shareholders may vote online during the Annual Meeting or in advance of the Annual Meeting by proxy by completing, signing, dating and returning the accompanying proxy card or by voting by telephone or via the Internet in accordance with the instructions listed on the proxy card. Execution of a proxy card, or voting by telephone or via the Internet prior to the Annual Meeting, will not in any way limit a shareholder's right to attend the Annual Meeting and vote during the meeting.
	If you complete and submit your proxy voting instructions, the persons named as proxies will follow your instructions. Any shareholder submitting a proxy has the right to abstain from voting for any individual nominee to the Board of Directors by writing that nominee's number on the space provided on the proxy card, checking the box next to the name of such individual nominee if voting by proxy via the Internet or, if using the telephone to vote by proxy, by following the verbal instructions for entering the two digit number appearing on the proxy card immediately before the name of such individual nominee. Where a choice has been specified on the proxy with respect to a matter, the shares represented by the proxy will be voted in accordance with such specifications. If a validly executed proxy card is returned without indicating how the shares should be voted on a matter, such proxies will be voted FOR election of the director nominees; FOR ratification of the appointment of the independent registered public accountants; and FOR the approval, on an advisory basis, of the compensation of our named executive officers.
	Other than (i) the election of directors, (ii) the ratification of Ernst & Young LLP, and (iii) the advisory vote to approve the compensation of our named executive officers, the Board knows of no other matters to be presented at the Annual Meeting. If any other matter should be properly presented at the Annual Meeting upon which a vote may be taken, shares represented by all proxies received by the Board will be voted with respect thereto in accordance with the judgment of the persons named as attorneys-in-fact in the proxies.

Revoking Your Proxy:

Any proxy given pursuant to this solicitation may be revoked by the person giving it at any time before the taking of the vote at the Annual Meeting. Proxies may be revoked by: (1) giving written notice of revocation to the Secretary of Repligen at any time before the taking of the vote at the Annual Meeting; (2) duly executing a later-dated proxy card relating to the same shares and delivering it to the Secretary of Repligen or by telephone or the Internet, in accordance with the instructions listed on the proxy card; or (3) attending and voting at the Annual Meeting (although attendance at the Annual Meeting will not in and of itself constitute a revocation of a proxy). For those shareholders who submit a proxy by telephone or the Internet, the date on which the proxy is submitted in accordance with the instructions listed on the proxy card is deemed to be the date of the proxy. Any written notice of revocation or subsequent proxy should be sent so as to be delivered to the mailing address of our principal executive offices at Repligen Corporation, Attention: Secretary, 41 Seyon Street, Building #1, Suite 100, Waltham, Massachusetts 02453, at or before the taking of the vote at the Annual Meeting.

Effect of Abstentions and Broker Non-Votes:

Shares represented by proxies that contain one or more abstentions or broker "non-votes," are counted as present or represented for purposes of determining the presence or absence of a quorum for the Annual Meeting. A broker "non-vote" occurs when a broker or other nominee holding shares for a beneficial owner votes on one proposal, but does not vote on another proposal because, with respect to such other proposal, the broker does not have discretionary voting power and has not received instructions from the beneficial owner. Broker "non-votes" are not considered voted for the particular matter. If a shareholder holds shares in "streetname" through a broker or other nominee, absent voting instructions from the shareholder, such shares will not be counted as voting and will have no effect on those proposals, other than Proposal 2, requiring approval by a majority of the votes cast. Proposal 2 to ratify the appointment of the Company's independent registered public accounting firm is a "routine" matter for which a broker does not need voting instruction in order to vote a shareholder's shares.

Votes Required for Adoption of Proposals:

Election of Directors. In accordance with our by-laws, directors are elected by a majority of the votes cast, in person or by proxy, at the Annual Meeting (meaning the number of shares voted "for" a nominee must exceed the number of shares voted against such nominee). Abstentions and broker non-votes will not be counted as votes cast with respect to the election of directors, and, therefore, will not have an effect on the election of director nominees.

Ratification of Independent Accountants. For the ratification of the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2020, an affirmative vote of a majority of the shares present or represented by proxy and entitled to vote on such matter is required for approval (meaning that, of the shares represented at the meeting and entitled to vote, a majority of those shares must be voted "for" the proposal for it to be approved). Abstentions shall be included in determining the number of shares present and entitled to vote on the proposal, thus having the effect of a vote against the proposal. Broker "non-votes", if any, are not counted in determining the number of shares present and entitled to vote and will therefore have no effect on the outcome.

Advisory Vote to Approve the Compensation of our Named Executive Officers. For the advisory vote to approve the compensation of our named executive officers, the affirmative vote of the majority of shares present, in person or represented by proxy, and entitled to vote on that matter is required for approval. Abstentions shall be included in determining the number of shares present and entitled to vote on the proposal, thus having the effect of a vote against the proposal. Broker "non-votes", if any, are not counted in determining the number of shares present and entitled to vote and will therefore have no effect on the outcome.

Other Matters. The Board knows of no other matters to be presented at the Annual Meeting. If any other matter should be properly presented at the Annual Meeting upon which a vote may be taken, the persons named on the enclosed proxy card will have discretionary authority to vote the shares represented by such proxies in accordance with their best judgment.

Cost of Proxy Solicitation:

The cost of solicitation will be borne by Repligen and, in addition to directly soliciting shareholders by mail, Repligen may request banks and brokers to solicit their customers who have stock of Repligen registered in the name of the nominee and, if so, will reimburse such banks and brokers for their reasonable out-of-pocket costs. Solicitation by officers and employees of Repligen may also be made of some shareholders in person or by mail or telephone following the original solicitation.

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting to be Held on May 13, 2020: The Company's Annual Report and this proxy statement will be available at www.proxyvote.com.

ADDITIONAL INFORMATION

Submitting Shareholder Proposals

Repligen must receive any proposal by a shareholder of Repligen for inclusion in the proxy statement furnished to all shareholders entitled to vote at our 2021 Annual Meeting of Shareholders at our principal executive office not later than December 30, 2020 in accordance with Rule 14a-8 issued under the Exchange Act.

If a shareholder wishes to propose a nomination of persons for election to our board of directors or present a proposal at an annual meeting but does not wish to have the proposal considered for inclusion in our proxy statement and proxy card, our amended and restated by-laws establish an advance notice procedure for such nominations and proposals. Shareholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the Board of Directors or by a shareholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely notice in proper form to our Secretary of the shareholder's intention to bring such business before the meeting.

The required notice must be in writing and received by our Secretary at our principal executive offices not earlier than 90 days nor later than 60 days prior to the first anniversary of the preceding year's annual meeting. However, in the event that the date of the annual meeting is advanced by more than 30 days or delayed by more than 60 days, from the first anniversary of the preceding year's annual meeting, a shareholder's notice must be so received no later than the close of business of the 90th day prior to such annual meeting or of the tenth day following the day on which notice of the date of such annual meeting was first made, whichever occurs later. For shareholder proposals to be brought before the 2021 Annual Meeting, the required notice must be received by our corporate secretary at our principal executive offices no earlier than February 22, 2021 and no later than March 14, 2021. Shareholder proposals and the required notice should be delivered to Repligen Corporation, Attention: Secretary, 41 Seyon Street, Building #1, Suite 100, Waltham, Massachusetts 02453.

Subject to the SEC's proxy rules, if a shareholder who wishes to present a proposal at the 2021 Annual Meeting (which is not otherwise submitted for inclusion in the proxy statement in accordance with the preceding paragraph) fails to notify the Company by March 14, 2021 and such proposal is brought before the 2021 Annual Meeting, then under the SEC's proxy rules, if the proxy statement or form of proxy for the 2021 Annual Meeting so provides, the proxies solicited by Repligen with respect to the 2020 Annual Meeting will confer discretionary voting authority with respect to the shareholder's proposal on the persons selected by Repligen to vote the proxies solicited by Repligen. If a shareholder makes a timely notification, the proxies may still exercise discretionary voting authority under circumstances consistent with the SEC's proxy rules.

Any proposal intended to be presented at the 2021 Annual Meeting must also comply with the other requirements of the proxy solicitation rules of the SEC. In order to curtail any controversy as to the date on which a proposal was received by Repligen, it is suggested that proponents submit their proposal by Certified Mail, Return Receipt Requested or other means, including electronic means that permit them to prove date of delivery.

Other Business

Management does not know of any other matters to be brought before the Annual Meeting except those set forth in the notice thereof. If other business is properly presented for consideration at the Annual Meeting, the persons named on the enclosed proxy will have discretionary authority to vote the shares represented by such proxies in accordance with their best judgment.

Voting Proxies

The Board of Directors recommends an affirmative vote on all proposals specified. Proxies will be voted as specified. If authorized proxies are submitted without specifying an affirmative or negative vote on any proposal, the shares represented by such proxies will be voted in favor of the Board of Directors' recommendations.

Householding

Our Annual Report, including audited financial statements for the fiscal year ended December 31, 2019, is being mailed to you along with this proxy statement. In order to reduce printing and postage costs, Broadridge Financial Solutions, Inc., ("Broadridge"), has undertaken an effort to deliver only one Annual Report and one proxy statement to multiple shareholders sharing an address. This delivery method, called "householding," is not being used if Broadridge has received contrary instructions from one or more of the shareholders sharing an address. If your household has received only one Annual Report and one proxy statement, Repligen

Corporation will deliver promptly a separate copy of the Annual Report and the proxy statement to any shareholder who sends a written request to Repligen Corporation, Attention: Secretary, 41 Seyon Street, Building #1, Suite 100, Waltham, MA 02453. If your household is receiving multiple copies of Repligen's Annual Reports or proxy statements and you wish to request delivery of only a single copy, you may send a written request to Repligen Corporation, Attention: Secretary, 41 Seyon Street, Building #1, Suite 100, Waltham, MA 02453.